

683

ISEE - 3

84 Sec. Elec. Mom. GEOTAIL

78-079A-01M

Solar Wind Proton Data

78-079A-01N

168 Sec. Solar Wind Elec. Moments

78-079A-01O

SW Protons Bulk Flow Latitude, 5-M

78-079A-01P

15-M & 2-AR Cosmic Ray Fluxes

78-079A-04C

REQ. AGENT

BMW

ACQ. AGENT

Suman K.

ISEE-3

84 - SECOND ELECTRON MOMENTS GEOTAIL

78-079A-01M

This data set consists of 1 9-track, 9 "data" files, ASCII, 6250 BPI, magnetic tape. The tape was created on a VAX 11/780 computer.

D#	C#	FILES	TIME SPAN
D-79069	C-27548	27	10/17/82 - 12/24/83

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

DATE: 30 September 1988
IN REPLY REFER TO: ESS-8-88:49-815
MAIL STOP: D438
TELEPHONE: (505)667-5389

Dr. J. H. King
NSSDC
Code 633
NASA/Goddard Space Flight Center
Greenbelt, MD 20771

Dear Joe:

Under separate cover I am sending you 3 magnetic tapes containing high temporal resolution plasma moments derived from data obtained by the Los Alamos experiments on ISEE-3/ICE.

78-079A-01M
D 79069
C 2754P

Tape 1 contains 9 files of electron moments for the interval from 17 October 1982 through 26 December 1983 when ISEE-3 was in the distant (and near) geomagnetic tail. Each data record contains the date, the time in secs, the time in UT, the electron density, the electron flow speed, the flow azimuth, the maximum electron temperature, and the minimum electron temperature. The format is (1X, I6, 1X, 2(F8.1, 1X), 5(1PE11.4, 1X)).

Tape 2 contains 6 files of solar wind proton moments for the interval from 16 August 1978 through 7 October 1979 at a nominal temporal resolution of 24 sec. Each data record contains the date, the time in secs, the time in UT, the proton density, the bulk flow speed, the bulk flow azimuth, the maximum proton temperature, and the minimum proton temperature. The format is identical to that of Tape 1.

Tape 3 contains 6 files. The first 2 of these files have solar wind proton moments for the interval from 7 October 1979 through 26 February 1980, after which time the ion instrument failed to return usable data. The format for the data records in these 2 files and the plasma elements included are identical to those of Tape 2. Files 3-5 contain our electron measurements for the 3 day interval surrounding the comet encounter in September 1985, that is 10, 11, 12 September. Each data record in these files contains the date, the time in secs, the time in UT, the core density, the maximum core temperature, the minimum core temperature, the halo density, the maximum halo temperature, the minimum halo temperature, the total electron density, the bulk flow speed, the bulk flow azimuth, the maximum total temperature, the minimum total temperature, the electron heat flux and the electron heat flux azimuth. The format is (1X, I6, 1X, 2(F8.1, 1X), 5(1PE11.4, 1X), 2(/, 6(PE11.4, 1X)). Since the core and halo parameters are derived from model fits and the other quantities are derived from a straight numerical integration over the entire electron distribution, the total density does not necessarily equal the sum of the core and halo densities.

Dr. J. H. King
ESS-8-88:49-815

-2-

30 September 1988

The last (6th) file on tape 3 contains solar wind electron temperature values (the densities and flow velocities are redundant with the proton values) for the interval from 16 August 1978 through 26 February 1980. You will note that these dates overlap with the dates for the proton moments on tapes 2 and 3. The format for the 6th file on Tape 3 is (1X, I6, 1X, 2(F8.1, 1X), 5(1PE11.4, 1X)).

Please give me a call (505-667-5389) or send me a SPAN message (ESSDP1::073500) if you have any questions pertaining to this submission.

Sincerely,



J. T. Gosling

JTG:mm

Cy: K. Ogilvie, GSFC/Code 602
T. VonRosenvinge, GSFC/Code 661
R. Wales, GSFC/Code 692
S.J. Bame, ESS-8/D438
CRM-4(2)/A150

Additional notes on
NSSDC data sets 78-079A-01M and -01N

These data have been supplied by Dr. J. T. Gosling, Los Alamos National Laboratory, (505)-667-5389, ESSDP1::073500 (SPAN), and contain high temporal resolution proton and/or electron moments derived from measurements obtained by the Los Alamos experiment on the ISEE-3/ICE spacecraft. The ion instrument on ISEE-3 failed on 1980-Feb-26 so no proton data are available from this instrument after that date.

See cover letter from Dr. Gosling for details of parameters, files and data formats. Additional information is given below. Much of it is based on information provided by Dr. Gosling.

78-079A-01M: "84-SECOND ELECTRON MOM GEOTAIL" ("Tape 1")
1982-Oct-17 to 1983-Dec-26

78-079A-01N: "24/168-S SW(8/78-2/80),GZ(9/85)" ("Tapes 2 & 3")

TAPE FORMAT

The tapes are labeled (LABEL='TAPE' for all three tapes), written in ASCII at 6250 bpi, using a default block size of 2048.

TIME RESOLUTIONS

The time resolution for the G-Z encounter data is 24 seconds. The time resolutions for the other files are different. It is nominally 84 seconds for the distant tail data (tape 1, all files), but occasionally is 24 seconds. It is nominally 24 seconds for the solar wind proton moments (tape 2 - all files, and tape 3 - first two files). It is nominally 168 seconds for the solar wind electron moments (tape 3, 6th file).

UNITS, ETC.

Date - is in YYMMDD format.

Time in seconds - is from start of day in SSSSS.S format (0-86400).

Time in UT - is UT time of day in HHMMSS.0 format (0.0-235959.0)

Densities are in cm⁻³.

Flow speeds are in km/s.

Flow azimuths are in degrees.

Temperatures are in Kelvins.

Heat fluxes are in (erg cm⁻² sec⁻¹).

Heat flux azimuths are in degrees.

COORDINATE SYSTEMS, ETC.

Bulk flow speed and azimuth

The plasma bulk flow speed is measured relative to the spacecraft and the bulk flow azimuth is measured positive from the (spacecraft-centered) solar ecliptic (SE) -X direction toward the SE -Y direction, i.e., 0 degrees corresponds to antisunward flow and positive flow angles correspond to flow towards dawn (+90 deg), and negative flow angles correspond to flow towards dusk (-90 deg). Thus,

antisunward = 0 deg = -GSEX
toward dawn = +90 deg = -GSEY
sunward flow= 180 deg = +GSEX
toward dusk = -90 deg = +GSEY

Z-axis = spacecraft spin axis direction, North

The spacecraft spin axis was maintained within 0.5 degree of perpendicular to the ecliptic.

Heat flux azimuth

Plasma heat flux azimuth (where available) is similar to the velocity azimuth, but it is measured from 0 to 360 degrees, i.e., 0 and 360 degrees correspond to heat flux directed antisunward, 180 degrees corresponds to sunward heat flux, 90 degrees corresponds to a heat flux directed toward dawn, and 270 degrees corresponds to a heat flux directed toward dusk. Thus,

antisunward = 0,360 deg = -GSEX
toward dawn = 90 deg = -GSEY
sunward flux= 180 deg = +GSEX
toward dusk = 270 deg = +GSEY

MINIMUM AND MAXIMUM TEMPERATURES

When the data are analyzed, a 2-D temperature matrix is calculated, which is subsequently diagonalized. Then nominally, the maximum temperature corresponds to the parallel temperature and the minimum temperature corresponds to the perpendicular temperature. This is done independently of the magnetic field measurements, but there is usually good agreement between the angle of maximum temperature and the magnetic field direction.

The alignment of the maximum temperature angle with the magnetic field is usually within 15 degrees. However, the electron temperature maximum is aligned perpendicular to the field about 2% of the time in the solar wind. See papers by J.L. Phillips et al. in JGR 1989, 1990.

OTHER REFERENCES

Feldman, et al., JGR, v.80, 4181, 1975.

Zwickl, et al., GRL, v.13, 401, 1986.

For a description of the Los Alamos instrument on the ISEE-3/ICE spacecraft, see: Bame, S.J., J.R. Asbridge, H.E. Felthauser, J.P. Glore, H.L. Hawk, and J. Chavez, ISEE-C solar wind plasma experiment, IEEE Trans. Geosci. Electron., GE-16, 160-162, 1978.

EPHEMERIS DATA

These data sets do not contain any spacecraft position information. Daily values of ISEE-3/ICE position in GSE coordinates are included in the magnetic field data from JPL and are available as NSSDC data set 78-079A-02D.

See also: Russell and Petrinec

GRL, 19, No. 10, 961-963, May 22, 1992

NSSDC DATA SET 78-079A-01M

Tape labels, file names, and file sizes

SPACECRAFT: ISEE-3/ICE

DATA SET NAME: 84-SECOND ELECTRON MOM. GEOTAIL

SOURCE: DR. J. T. GOSLING
MS-D438, LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NM 87545
Phone: 505-667-5389
e-mail (SPAN): ESSDP1::073500

TIME SPAN: 17oct82-26dec83

QUANTITY: 1 tape ("Tape 1" of cover letter from J. T. Gosling)

TAPE MEDIUM AND DENSITY: 9-track, 6250 bpi

TAPE FORMAT: ASCII, VAX (ANSI) STANDARD LABELED TAPE

TAPE BLOCK SIZE: 2048 Bytes

DATA FORMAT: See cover letter from J. T. Gosling

Tape Label	Data File Name	Data File Size Tape blocks/VAX blocks/MBy/lines
TAPE	1TAIL.50	1767 / 6984 / 3.5/ 40634
	2TAIL.50	2816 / 11129 / 5.5/ 64747
("Tape 1")	3TAIL.50	4792 / 18944 / 9.5/ 110215
(84-s geotail electrons)	4TAIL.50	4045 / 15988 / 8 / 93018
	5TAIL.50	4968 / 19638 / 10 / 114256
	6TAIL.50	4922 / 19458 / 10 / 113205
	7TAIL.50	4299 / 16995 / 8.5/ 98876
	8TAIL.50	4696 / 18564 / 9.5/ 108007
	9TAIL.50	2540 / 10041 / 5 / 58416

Notes:

1. Since this is a standard labeled tape, each data file has a header file and a trailer file associated with it.
2. On a VAX, to copy (e.g.) file 1TAIL.50 from tape to a disk file with the same name, do:

```
$ ALLOCATE <dev_name>
$ MOUNT <dev_name>: TAPE
$ COPY <dev_name>:1TAIL.50 *.*
```

This will require 6984 VAX blocks on disk, and

will create an ASCII file consisting of 40634 lines
of data.

To copy all the files from tape to disk, do:

```
$ ALLOCATE <dev_name>
$ MOUNT <dev_name>: TAPE
$ COPY <dev_name>:.*  *.*
```

This will require about 140,000 VAX blocks.

Data File	Time Span		
	YY/MM/DD hh:mm:ss.s	to	YY/MM/DD hh:mm:ss.s
1TAIL.50	82/10/17 00:46:01.0	to	82/12/04 00:29:16.9
2TAIL.50	82/12/05 00:51:15.7	to	83/02/20 00:19:21.0
3TAIL.50	83/02/20 00:22:08.9	to	83/03/26 01:43:59.5
4TAIL.50	83/03/27 01:45:11.4	to	83/05/01 01:33:50.2
5TAIL.50	83/05/01 01:36:14.2	to	83/06/26 01:02:53.8
6TAIL.50	83/06/26 01:04:17.8	to	83/07/31 00:06:59.6
7TAIL.50	83/07/31 00:07:47.6	to	83/08/27 21:38:08.8
8TAIL.50	83/08/28 00:41:39.8	to	83/10/30 00:29:49.1
9TAIL.50	83/10/30 00:25:37.2	to	83/12/24 23:23:58.1

78-0722A-01M
10/17/82 - 12/24/83
D-79069 C-27548

\$\$
\$ASS IN HT1
\$SEX TPDUMP ES

CLW3 CF TAPE GOSLINGC

INPUT TAPE GOSLINGC00N HT1
DATA INPUT HS,NF=26 SR=2=1=1 SR=2 LAST 1 SR=26=1=1 SH 26 LAST 1

FILE	INPUT FCS.	DATA RECORDS MAX.	SIZE	PERM ZERO R SHORT UNDEF.	RECS. TOTL	INPUT FCTRIES
1	8	9	7	6	1	
FILE 2 RECORD						
(1)	3 1 3 -3 8 3 9	2 0 3 8 3 2 3 1	3 0 2 0 3 1 3 7 0	2 0 2 0 3 2 3 7	3 6 0 1 2 5 3 0	3 0 2 0 2 0 3 4
(4)	3 1 2 -2 4 3 5	2 0 3 9 3 2 3 5	3 1 1 2 2 6 1 0	3 2 2 1 2 1 7 3	3 2 1 2 0 2 0 3 5	3 0 4 5 2 E 3 0
(8)	2 E 3 5 3 2 3 1	3 9 4 5 2 8 3 4	3 5 3 8 3 3 7 8	3 9 2 0 3 8 7 2	3 1 3 3 1 3 7	3 5 4 5 2 E 3 1
(12)	3 6 2 0 3 0 2 1	3 2 3 4 5 2 0 8	3 0 3 0 2 1 2 0	3 2 2 0 3 6 2 8	3 2 0 2 4 6 2 0	3 4 3 7 3 2 0 5
(16)	3 7 2 4 5 2 0 8	3 1 5 0 2 1 2 0	2 1 0 2 0 5 2 0	3 7 1 0 4 5 2 0	3 1 3 2 0 2 0 2 0	3 2 2 5 2 5 3 8
(20)	2 1 5 4 5 2 0 8	2 0 3 6 2 5 2 0	2 0 3 6 2 5 2 0	3 7 0 0 4 5 2 0	3 1 2 2 0 2 0 2 0	2 0 2 5 2 0 2 0
(24)	2 6 3 4 3 2 2 1	2 6 3 2 2 0 3 4	3 7 3 4 3 4 4 0	2 8 3 4 3 6 2 0	2 0 3 1 2 5 2 0	2 0 2 5 2 0 2 0
(28)	2 5 3 5 3 0 2 1	3 2 2 0 3 9 2 0	2 0 2 0 3 5 7 0	3 1 3 2 2 5 2 0	2 0 2 1 3 6 2 0	3 0 3 7 2 0 2 0
(32)	2 1 2 3 3 2 0 7	1 5 3 6 7 3 3 6	4 5 5 6 3 3 0 0	2 6 2 0 3 2 2 0	3 4 3 2 3 4 3 9	4 5 2 P 2 0 3 5
(36)	2 6 0 3 8 3 2 3 1	3 5 0 3 1 7 3 0	2 0 2 1 3 2 1 0	3 6 0 2 0 5 2 0	2 0 2 1 4 5 2 0	3 0 3 7 2 0 2 0
(40)	2 E 3 8 3 5 3 2 0	3 9 4 5 2 8 3 0	3 0 2 1 2 0 1 0	2 9 4 2 0 3 2 0	2 0 2 1 5 2 0	3 0 2 1 2 0 2 0
(44)	3 6 4 5 2 8 3 2	3 5 3 5 3 4 3 8	3 5 3 5 3 4 3 8	3 1 3 2 0 5 2 0	3 1 3 2 0 5 2 0	2 E 4 5 3 0 2 0
(48)	3 4 3 8 4 5 2 3	3 0 3 2 0 4 2 0	3 6 2 2 3 1 1 0	3 4 3 4 4 5 2 0	3 0 3 2 0 4 2 0	3 6 2 E 3 3 3 5
(52)	3 0 3 5 2 0 2 1	3 1 2 E 3 4 3 6	3 1 3 8 4 6 0 0	3 6 3 5 3 0 3 0	3 6 3 9 2 0 3 8	3 3 3 2 4 2 0 0
(56)	3 4 2 E 3 8 2 0	3 0 3 6 2 5 2 0	3 5 2 3 2 0 8 0	2 0 2 1 2 0 2 0	3 8 2 1 2 0 2 0	3 2 2 E 3 4 3 2
(60)	2 0 3 4 2 5 2 4	3 6 3 2 3 2 4 5	2 0 3 6 2 5 2 0	3 6 3 5 2 0 3 4	2 0 2 1 3 6 2 0	2 0 2 1 3 3 2 4
(64)	3 8 2 E 3 7 2 2	6 0 2 0 5 9 3 5	3 4 7 8 2 6 1 7	2 0 2 1 3 6 2 0	2 5 2 5 2 0 3 2	2 0 2 1 3 3 2 0
(68)	3 5 3 4 3 0 3 2	4 5 2 B 3 1 3 2	2 0 2 1 3 5 0 5	3 5 3 2 0 5 3 3	3 1 3 2 0 5 2 0	2 5 3 8 2 0 2 1
(72)	3 1 3 4 3 7 2 1	2 0 2 1 3 2 0 7	3 3 2 1 2 0 2 7	2 0 2 1 2 1 3 6	3 1 3 2 0 5 2 0	3 2 2 E 3 3 3 5
(76)	3 4 3 4 2 7 2 4	3 6 3 2 2 5 2 4	2 0 2 1 3 2 0 7	3 7 2 1 3 2 2 5	3 7 2 1 3 2 2 5	2 0 2 1 3 2 2 0
(80)	3 5 3 0 3 0 3 8	3 1 3 8 2 0 3 8	3 1 3 8 2 0 3 8	3 6 3 3 1 7 3 5	4 5 2 B 3 0 3 8	3 6 3 5 2 0 4 5
(84)	3 0 3 0 2 0 2 1	3 5 2 E 3 9 3 4	3 1 3 9 4 5 2 5	2 0 2 1 3 0 3 5	2 1 2 0 3 1 2 0	3 1 3 7 3 3 3 1
(88)	3 1 2 E 3 4 2 7	3 1 3 8 4 5 2 0	3 0 3 5 3 3 0 0	3 8 3 5 2 0 3 8	3 4 3 4 3 9 3 2	4 5 2 B 3 0 3 5
(92)	2 0 3 6 2 E 3 8	3 0 3 3 3 5 4 5	2 0 3 6 1 3 3 0	2 0 3 6 2 5 5 2	3 2 3 3 1 4 5	3 0 3 6 2 0 3 5
(96)	3 7 3 5 3 3 4 5	2 8 3 0 3 5 2 0	2 0 3 1 2 E 3 4	3 5 3 4 3 7 4 5	2 8 3 0 3 5 3 0	3 0 3 8 3 9 2 0
(100)	3 0 3 1 3 0 3 1	3 2 3 4 2 0 3 6	2 0 2 0 3 6 2 0	3 1 4 5 2 0 3 0	2 0 2 1 3 6 2 0	3 7 4 5 2 B 3 0
(104)	4 5 2 B 3 1 3 7	2 0 2 1 3 5 2 0	3 7 3 2 0 3 6 2 0	4 5 2 B 3 0 3 0	2 0 2 1 3 6 2 0	3 1 3 7 2 0 2 0
(108)	2 0 2 0 3 5 3 7	3 6 3 8 2 0 3 5	2 0 2 1 3 5 2 0	3 6 3 1 3 5 2 0	3 0 2 0 3 2 0 0	3 2 2 E 3 3 3 5
(112)	3 2 2 1 2 0 3 2	2 0 2 1 3 4 3 7	3 2 2 1 2 0 3 7	3 5 2 0 2 0 3 6	3 4 3 2 2 0 2 0	3 0 3 6 2 0 2 0
(116)	3 5 2 1 2 0 3 2	3 0 2 1 2 0 3 7	3 1 4 5 2 0 3 0	3 2 2 1 2 0 3 7	3 4 3 5 2 0 3 5	3 1 3 0 3 0 3 0
(120)	3 5 3 4 2 8 3 3	3 6 3 2 2 5 3 3	2 0 2 1 2 0 3 7	3 6 3 4 3 1 3 7	3 7 0 0 2 0 3 6	3 0 2 0 2 0 3 6
(124)	3 2 3 0 4 5 2 9	3 9 3 5 3 0 3 0	3 8 3 1 2 0 3 7	3 2 3 1 3 0 3 1	3 7 0 2 0 2 0 0	3 0 2 6 2 0 3 6
(128)	3 6 3 1 3 8 4 5	2 8 3 0 3 0 2 0	2 0 3 5 2 0 3 6	2 8 3 5 2 0 3 8	3 2 3 1 3 0 3 1	3 0 2 6 2 0 3 6
(132)	2 6 3 1 3 5 2 0	3 0 3 3 3 5 4 5	2 0 3 6 1 3 3 0	2 0 3 6 2 5 5 2	2 0 3 6 2 5 5 2	3 0 3 6 2 0 3 6
(136)	3 0 3 5 2 0 3 4	3 1 3 5 3 1 3 7	2 0 3 6 1 3 3 0	2 6 3 6 3 2 2 0	2 6 3 6 3 2 2 0	2 6 3 2 2 0 3 6
(140)	2 0 2 0 3 2 2 0	3 3 3 5 3 1 3 0	4 5 2 B 3 1 3 6	4 5 2 B 3 0 3 0	4 5 2 B 3 0 3 2	4 5 2 B 3 0 3 2
(144)	3 0 3 4 2 0 3 4	2 0 2 0 3 1 3 0	3 8 3 2 0 3 4 0	3 6 3 7 4 5 2 0	3 7 0 0 2 0 3 2	3 0 3 8 3 2 3 1
(148)	2 0 2 0 3 1 3 5	3 6 4 5 2 6 0 0	3 2 3 4 3 8 2 0	3 5 2 0 2 0 3 6	3 4 3 2 4 5 2 0	3 2 2 1 2 0 3 3
(152)	3 1 3 3 3 1 3 7	2 0 2 0 2 0 3 4	3 1 3 8 3 0 2 0	3 2 2 1 2 0 3 2	3 5 2 0 2 0 3 0	3 2 2 1 2 0 3 2
(156)	3 9 3 3 4 5 2 0	3 0 3 3 2 2 0 2 0	3 2 3 2 1 2 0 2 0	3 3 3 5 3 1 3 0	3 6 3 2 4 5 2 0	3 6 3 2 4 5 2 0
(160)	2 0 2 0 2 0 3 2	3 2 3 2 0 3 2 0	3 2 3 2 1 2 0 2 0	3 6 3 7 4 5 2 0	3 7 0 0 2 0 3 2	3 7 0 0 2 0 3 2
(164)	2 0 2 0 2 0 3 2	3 2 3 2 0 3 2 0	3 2 3 2 1 2 0 2 0	3 6 3 7 4 5 2 0	3 7 0 0 2 0 3 2	3 7 0 0 2 0 3 2
(168)	2 2 3 1 2 E 3 4	3 7 3 3 3 5 4 5	3 0 3 3 2 0 3 0	3 4 3 8 3 2 4 5	2 0 2 0 2 0 3 0	3 5 2 2 2 5 5 1
(172)	2 0 2 0 2 0 3 2	3 7 3 5 3 7 3 0	4 5 2 B 3 1 3 6	3 8 3 8 2 1 3 0	3 1 3 7 0 2 0 0	2 0 3 8 2 0 3 4
(176)	3 2 2 1 3 6 2 E	4 5 2 B 3 1 3 7	2 0 2 0 2 0 3 0	3 9 5 5 3 2 2 0	3 1 3 7 0 2 0 0	2 0 3 8 2 0 3 4
(180)	2 1 2 3 1 3 1	3 4 3 4 3 8 2 0	3 2 3 2 1 2 0 2 0	3 6 3 7 4 5 2 0	3 1 3 7 0 2 0 0	2 0 3 8 2 0 3 4
(184)	3 9 4 3 2 B 3 0	3 2 2 0 2 0 3 2	2 0 2 0 2 0 3 0	3 9 4 5 2 B 3 0	3 5 2 0 2 0 3 1	3 7 4 5 2 E 3 5
(188)	2 1 2 2 2 6 3 4	3 5 3 2 3 5 4 2	3 1 3 3 3 1 3 1	3 7 3 4 3 4 5 2	3 7 3 4 3 4 5 2	3 5 2 F 2 8 3 2

(	192)	303352211	332652356	519354518	313224521	322257431	74524528	312E3434	77364528	30363030
(	1960)	38392038	32313031	372920600	34363438	25322023	71313654	38253661	3462E34	2A232024
(	231)	2322573	36353445	2B347240	20332630	12155745	247C3226	29322533	36393945	2B363654
(	254)	32343943	2B313888							2712E34

FILE 2 RECORD 1767 LENGTH 2048 BYTES

(	9)	3233839	25383231	52353424	26252074	39372235	21202020	38313728	25202031	2E323634
(	49)	31212074	2E323432	70452836	32212433	2E323633	70452836	32212433	2E323633	3E212034
(	81)	2E36379	32452874	3513548	35245832	31223034	21202020	35283125	34202020	3E353431
(	121)	312E3433	32384528	30381204	322E2856	35254528	21202020	332E3635	34202020	312E3730
(	161)	3537426	30352424	312E3643	34334528	30353036	38392038	32313230	34252024	2B363635
(	201)	26313230	35253420	312E3644	312E3645	21202020	26322630	32313230	34202020	2E342020
(	241)	2B313221	26312637	37843535	26352524	21202020	26322637	37843535	21202020	34233245
(	282)	26213734	392E3424	20202312	32392E34	20202312	33283439	45283038	20202312	35263636
(	321)	20203125	32333135	43283016	24207125	26223439	20202125	25253436	452F3035	30363839
(	361)	21323221	323513424	26322633	202023031	27223225	21202020	2E323733	34452E34	312D2034
(	401)	2E323221	37542637	32212632	26452045	21202020	26322631	37542637	21202020	2E323221
(	441)	37452632	35363538	39203818	31323534	20202020	35313234	37542637	21202020	2E323221
(	481)	39354523	30312120	33263976	38314528	30323230	35283534	33294529	21202020	31353177
(	521)	31322624	512E2627	70514325	21202020	32351328	21202020	31203034	21202020	312E2634
(	561)	312E3323	20312E33	30376575	28313124	26352537	36343845	2B313226	26353245	2B353226
(	601)	26312623	35313245	26352525	20312636	35343045	2E303539	30383920	38323132	36362631
(	641)	35263221	31263138	270526512	21202020	32351328	21202020	32351328	21202020	2A212632
(	681)	15353131	452B3132	65023135	38323236	45063135	35323236	35323236	35323236	312E2632
(	721)	3233421	20203131	363652E12	20202031	39323236	32212031	32421202	31203034	312E2634
(	761)	35452B31	32202032	25383624	24452B31	32212031	26373235	36452E31	21202031	2E332634
(	801)	35313238	31323832	31323834	20202031	32353325	31202020	32353325	31202020	2B353226
(	841)	32212624	35323831	36323834	31202020	32353326	31202020	32353326	31202020	2A212632
(	881)	31263238	31344528	303533410	38392038	32313236	34202020	34202020	34202020	312E2632
(	921)	21312524	31344314	26313134	20202020	31233546	2B303226	213232F1	28336345	2E393633
(	961)	32313745	2B303529	244126275	37352443	2E203034	31363532	38322132	29342F21	29313430
(	1001)	26253233	34312631	20213131	452B3031	20213131	452B3031	20213131	36353337	452B3132
(	1041)	452B3032	38323232	452B3032	452B3032	21202020	32353337	452B3032	20363231	30363223
(	1081)	21213132	30323233	26202020	35323232	21202020	35323232	21202020	35323232	25323231
(	1121)	32212624	31344314	26313134	20202020	31233546	2B303226	213232F1	28336345	2E393633
(	1161)	39213832	31323234	26323234	20202020	31233546	2B303226	213232F1	28336345	2E393633
(	1201)	32213533	31343135	21374528	30323236	33223236	32353339	32353339	32353339	32353339
(	1241)	373234521	313231321	78352638	21202020	32353339	32353339	32353339	32353339	312E2632
(	1281)	36353542	20312E32	20312E32	20312E32	20312E32	20312E32	20312E32	20312E32	32353339
(	1321)	—	2E313E42	20312E32	31373534	28313221	28313221	28313221	28313221	32353339
(	1361)	31322E32	2020312E	2020312E	2020312E	2020312E	2020312E	2020312E	2020312E	32353339
(	1401)	21213125	37393175	452B3135	25213125	36383924	21202020	32353339	21202020	30352020
(	1441)	5ESE5E	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	1481)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	1521)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	1561)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	1601)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	1641)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	1681)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	1721)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	1761)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	1801)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	1841)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	1881)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	1921)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	1961)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	2001)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE
(	2041)	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE	SESESE

FILE INPUT DATA RECORDS MAX. SIZE 2048 LENGTH 2048 RECS. #RECS. TOTAL #

FILE 2 RECORD 1768 1768 1768 2048 2048 2048

FILE 2 RECORD 1767 1767 1767 2048 2048 2048

PINTEREST.DSA 2048 2048 2048 2048 2048 2048

	FILE	26 RECORD	2540 LENGTH	264 BYTES
1	8.0	2E363438	34452559	35323838
1	12.0	3E253237	39324524	30323212
1	16.0	3E344628	71352244	31362244
1	20.0	2E323832	352E3120	20323235
1	24.0	2E23240	21322533	36972535
1	28.0	2E13278	39323120	20322520
1	32.0	2E23257	43203224	36972535
1	36.0	2E383321	30323220	20322535
1	40.0	2E32442	6462653	37322535
1	44.0	34452B34	35343338	31323331
1	48.0	39324523	30352224	35343331
1	52.0	3E323026	31323533	30352224
1	56.0	3E25322	35323533	30352224
1	60.0	3E25322	21322533	36972535
1	64.0	342E3921	29203335	32343331
1	68.0	35373631	452E3132	32343331
1	72.0	3E32323	21322533	36972535
1	76.0	35452831	32212633	36972535
1	80.0	3E353038	39203833	31323533
1	84.0	35223221	352E3338	31323533
1	88.0	342E3336	35357462	36752435
1	92.0	2E325232	30352224	36972535
1	96.0	32324524	21322533	36972535
1	100.0	2E253434	30323533	36972535
1	104.0	45263434	24203225	31323533
1	108.0	2E232336	34342538	20323533
1	112.0	32212337	2E353839	34452E31
1	116.0	35253835	30352452	31323533
1	120.0	3E324528	30353030	31323533
1	124.0	39313148	28323536	36752435
1	128.0	3E323524	21322533	36972535
1	132.0	28313524	20352224	36972535
1	136.0	32324526	21322533	36972535
1	140.0	2E232326	33343639	452E3132
1	144.0	3832E26	21202134	36832E26
1	148.0	2E353535	365452B34	36752435
1	152.0	31323330	29202032	39323330
1	156.0	34323526	39353442	362452B34
1	160.0	30253236	39323330	36752435
1	164.0	2B303020	20352E32	36752435
1	168.0	2E312E32	37323445	362452B34
1	172.0	2E232352	21321234	36972535
1	176.0	33333731	45263335	30323533
1	180.0	2E232335	35323625	36752435
1	184.0	3E452B34	32323336	36752435
1	188.0	2E232326	32323235	36752435
1	192.0	3E322324	33223518	36752435
1	196.0	38392038	33313033	30202030
1	200.0	2E452E32	34323045	20323533
1	204.0	37373645	24323556	36752435
1	214.0			
2	4.0	30363839	29383331	32323336
2	8.0	31253234	35313733	32323336
2	12.0	3E323337	35325336	32323336
2	16.0	33324528	30323223	36752435
2	20.0	33333133	342E3724	36752435
2	24.0	2B323234	26312E37	36752435
2	28.0	3E323937	38233720	36752435
2	32.0	42232324	35325334	36752435
2	36.0	2E363334	32323526	36752435
2	40.0	2E323935	51452630	32323336
2	44.0	34452B39	353503038	35323336
2	48.0	31324528	34323531	36752435
2	52.0	33325212	312E3533	36752435

FILE 26 RECORD 2540 LENGTH 264 BYTES

FILE	INPUT REC'S.	DATA RECORDS INPUT	MAX.	SIZE	PER MN	ZERO B	SHRT	UNDEF.	# RECS.	TOTAL #	INPUT BYTIES
	26	2541	2648	2648	1	1	1	1	1	1	1

ECU CURE STEPPED AFTER FILE 21 NO OF PERMANENT READ ERRORS 11

REQ. AGENT	RAND NO.	ACQ. AGENT
GWM		Sumant K.

ISEE-3
SOLAR WIND PROTON DATA
78-079A-01N

This dataset consists of 2 9-track, Ascii, 6250 BPI, magnetic tapes. They were created on a VAX 11/780 computer. This dataset contains Solar Wind Proton data for Isee-3. Refer to the documentation for description of data files. Also, please note that the documentation notes 6 "data" files for each tape. Each data file has a 80 byte header and trailer file associated with it.

D #	C#	No. of Files	Time Span
D-79067	C-27532	18	08/16/78 - 10/07/79
D-79068	C-27533	18	Files 1-6 10/07/79 - 02/19/80 Files 7-15 09/10/85 - 09/12/85 Files 16-18 08/16/78 - 02/18/80

NSSDC Data sets 78-079A-01M (tape 1)
& 78-079A-01N (tapes 2,3)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

DATE: 30 September 1988
IN REPLY REFER TO: ESS-8-88:49-815
MAIL STOP: D438
TELEPHONE: (505)667-5389

Dr. J. H. King
NSSDC
Code 633
NASA/Goddard Space Flight Center
Greenbelt, MD 20771

Dear Joe:

Under separate cover I am sending you 3 magnetic tapes containing high temporal resolution plasma moments derived from data obtained by the Los Alamos experiments on ISEE-3/ICE.

Tape 1 contains 9 files of electron moments for the interval from 17 October 1982 through 26 December 1983 when ISEE-3 was in the distant (and near) geomagnetic tail. Each data record contains the date, the time in secs, the time in UT, the electron density, the electron flow speed, the flow azimuth, the maximum electron temperature, and the minimum electron temperature. The format is (1X, I6, 1X, 2(F8.1, 1X), 5(1PE11.4, 1X)).

Tape 2 contains 6 files of solar wind proton moments for the interval from 16 August 1978 through 7 October 1979 at a nominal temporal resolution of 24 sec. Each data record contains the date, the time in secs, the time in UT, the proton density, the bulk flow speed, the bulk flow azimuth, the maximum proton temperature, and the minimum proton temperature. The format is identical to that of Tape 1.

Tape 3 contains 6 files. The first 2 of these files have solar wind proton moments for the interval from 7 October 1979 through 26 February 1980, after which time the ion instrument failed to return usable data. The format for the data records in these 2 files and the plasma elements included are identical to those of Tape 2. Files 3-5 contain our electron measurements for the 3 day interval surrounding the comet encounter in September 1985, that is 10, 11, 12 September. Each data record in these files contains the date, the time in secs, the time in UT, the core density, the maximum core temperature, the minimum core temperature, the halo density, the maximum halo temperature, the minimum halo temperature, the total electron density, the bulk flow speed, the bulk flow azimuth, the maximum total temperature, the minimum total temperature, the electron heat flux and the electron heat flux azimuth. The format is (1X, I6, 1X, 2(F8.1, 1X), 5(1PE11.4, 1X), 24/, 6(PE11.4, 1X)). Since the core and halo parameters are derived from model fits and the other quantities are derived from a straight numerical integration over the entire electron distribution, the total density does not necessarily equal the sum of the core and halo densities.

Dr. J. H. King
ESS-8-88:49-815

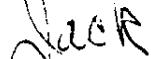
-2-

30 September 1988

The last (6th) file on tape 3 contains solar wind electron temperature values (the densities and flow velocities are redundant with the proton values) for the interval from 16 August 1978 through 26 February 1980. You will note that these dates overlap with the dates for the proton moments on tapes 2 and 3. The format for the 6th file on Tape 3 is (1X, I6, 1X, 2(F8.1, 1X), 5(1PE11.4, 1X)).

Please give me a call (505-667-5389) or send me a SPAN message (ESSDPI::073500) if you have any questions pertaining to this submission.

Sincerely,

 dcr

J. T. Gosling

JTG:mm

Cy: K. Ogilvie, GSFC/Code 602
T. VonRosenvinge, GSFC/Code 661
R. Wales, GSFC/Code 692
S.J. Bame, ESS-8/D438
CRM-4(2)/A150

Additional notes on
NSSDC data sets 78-079A-01M and -01N

These data have been supplied by Dr. J. T. Gosling, Los Alamos National Laboratory, (505)-667-5389, ESSDP1::073500 (SPAN), and contain high temporal resolution proton and/or electron moments derived from measurements obtained by the Los Alamos experiment on the ISEE-3/ICE spacecraft. The ion instrument on ISEE-3 failed on 1980-Feb-26 so no proton data are available from this instrument after that date.

See cover letter from Dr. Gosling for details of parameters, files and data formats. Additional information is given below. Much of it is based on information provided by Dr. Gosling.

78-079A-01M: "84-SECOND ELECTRON MOM GEOTAIL" ("Tape 1")
1982-Oct-17 to 1983-Dec-26

78-079A-01N: "24/168-S SW(8/78-2/80),GZ(9/85)" ("Tapes 2 & 3")

TAPE FORMAT

The tapes are labeled (LABEL='TAPE' for all three tapes), written in ASCII at 6250 bpi, using a default block size of 2048.

TIME RESOLUTIONS

The time resolution for the G-Z encounter data is 24 seconds. The time resolutions for the other files are different. It is nominally 84 seconds for the distant tail data (tape 1, all files), but occasionally is 24 seconds. It is nominally 24 seconds for the solar wind proton moments (tape 2 - all files, and tape 3 - first two files). It is nominally 168 seconds for the solar wind electron moments (tape 3, 6th file).

UNITS, ETC.

Date - is in YYMMDD format.

Time in seconds - is from start of day in SSSSS.S format (0-86400).

Time in UT - is UT time of day in HHMMSS.0 format (0.0-235959.0)

Densities are in cm⁻³.

Flow speeds are in km/s.

Flow azimuths are in degrees.

Temperatures are in Kelvins.

Heat fluxes are in (erg cm⁻² sec⁻¹).

Heat flux azimuths are in degrees.

COORDINATE SYSTEMS, ETC.

Bulk flow speed and azimuth

The plasma bulk flow speed is measured relative to the spacecraft and the bulk flow azimuth is measured positive from the (spacecraft-centered) solar ecliptic (SE) -X direction toward the SE -Y direction, i.e., 0 degrees corresponds to antisunward flow and positive flow angles correspond to flow towards dawn (+90 deg), and negative flow angles correspond to flow towards dusk (-90 deg). Thus,

antisunward = 0 deg = -GSEX
toward dawn = +90 deg = -GSEY
sunward flow= 180 deg = +GSEX
toward dusk = -90 deg = +GSEY

Z-axis = spacecraft spin axis direction, North

The spacecraft spin axis was maintained within 0.5 degree of perpendicular to the ecliptic.

Heat flux azimuth

Plasma heat flux azimuth (where available) is similar to the velocity azimuth, but it is measured from 0 to 360 degrees, i.e., 0 and 360 degrees correspond to heat flux directed antisunward, 180 degrees corresponds to sunward heat flux, 90 degrees corresponds to a heat flux directed toward dawn, and 270 degrees corresponds to a heat flux directed toward dusk. Thus,

antisunward = 0,360 deg = -GSEX
toward dawn = 90 deg = -GSEY
sunward flux= 180 deg = +GSEX
toward dusk = 270 deg = +GSEY

MINIMUM AND MAXIMUM TEMPERATURES

When the data are analyzed, a 2-D temperature matrix is calculated, which is subsequently diagonalized. Then nominally, the maximum temperature corresponds to the parallel temperature and the minimum temperature corresponds to the perpendicular temperature. This is done independently of the magnetic field measurements, but there is usually good agreement between the angle of maximum temperature and the magnetic field direction.

The alignment of the maximum temperature angle with the magnetic field is usually within 15 degrees. However, the electron temperature maximum is aligned perpendicular to the field about 2% of the time in the solar wind. See papers by J.L. Phillips et al. in JGR 1989, 1990.

OTHER REFERENCES

Feldman, et al., JGR, v.80, 4181, 1975.

Zwickl, et al., GRL, v.13, 401, 1986.

For a description of the Los Alamos instrument on the ISEE-3/ICE spacecraft, see: Bame, S.J., J.R. Asbridge, H.E. Felthauser, J.P. Glore, H.L. Hawk, and J. Chavez, ISEE-C solar wind plasma experiment, IEEE Trans. Geosci. Electron., GE-16, 160-162, 1978.

EPHEMERIS DATA

These data sets do not contain any spacecraft position information. Daily values of ISEE-3/ICE position in GSE coordinates are included in the magnetic field data from JPL and are available as NSSDC data set 78-079A-02D.

See also Russell and Petrinec
GRL, 19, No. 10, 961-963

NSSDC DATA SET 78-079A-01N

Tape labels, file names, and file sizes

SPACECRAFT: ISEE-3/ICE

DATA SET NAME: 24/168-S SW(8/78-2/80), GZ(9/85)

SOURCE: DR. J. T. GOSLING
MS-D438, LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NM 87545
Phone: 505-667-5389
e-mail (SPAN): ESSDP1::073500

TIME SPAN: 16Aug78-26Feb80 and 10-12Sep85.

QUANTITY: 2 tapes ("Tape 2" and "Tape 3" of cover letter)

TAPE MEDIUM AND DENSITY: 9-track, 6250 BPI

TAPE FORMAT: ASCII, VAX (ANSI) STANDARD LABELED TAPES

TAPE BLOCK SIZE: 2048 Bytes

DATA FORMAT: See cover letter from J. T. Gosling

Tape Label	Data File Name	Data File Size
		Tape blocks/VAX blocks/MBy/lines
TAPE	1TRACK.130	5155 / 20378 / 10 / 118562
	2TRACK.130	4694 / 18554 / 9 / 107946
("Tape 2")	3TRACK.130	4261 / 16842 / 8 / 97988
(24-s SW prot.)	4TRACK.130	5730 / 22651 / 11 / 131783
	5TRACK.130	6465 / 25556 / 13 / 148686
	6TRACK.130	5451 / 21547 / 11 / 125359
TAPE	7TRACK.130	6550 / 25892 / 13 / 150642
	8TRACK.130	3508 / 13868 / 7 / 80683
("Tape 3")	850910.COMET	286 / 1102 / 0.6 / 9003
(24-s GZ elec.)	850911.COMET	309 / 1192 / 0.6 / 9732
	850912.COMET	276 / 1063 / 0.5 / 8682
(168-s SW elec.)	1OLD.100	5790 / 22345 / 11 / 220007

Notes:

1. Since these are standard labeled tapes, each data file has a header file and a trailer file associated with it.
2. On a VAX, to copy (e.g.) file 1TRACK.130 from tape to a disk file with the same name, do:

```
$ ALLOCATE <dev_name>
$ MOUNT <dev_name> TAPE
```

```
$ COPY <dev_name>:1TRACK.130 *.*
```

This will require 20,378 VAX blocks on disk, and
will create an ASCII file consisting of 118,562
lines of data.

To copy all the files from tape to disk, do:

```
$ ALLOCATE <dev_name>:  
$ MOUNT <dev_name>: TAPE  
$ COPY <dev_name>:*.* *.*
```

This will require about 125,000 VAX blocks for "tape 2"
and about 65,000 VAX blocks for "tape 3".

Data File	Time Span			
	YY/MM/DD hh:mm:ss.s	to	YY/MM/DD hh:mm:ss.s	
1TRACK.130	78/08/16 15:41:17.0	to	78/11/02 15:14:57.0	
2TRACK.130	78/11/02 16:13:12.0	to	78/12/31 01:39:55.0	
3TRACK.130	78/12/31 01:38:18.0	to	79/02/25 00:24:42.0	
4TRACK.130	79/02/25 00:49:40.0	to	79/05/06 00:13:46.0	
5TRACK.130	79/05/06 00:08:33.0	to	79/07/29 01:18:44.0	
6TRACK.130	79/07/29 01:19:32.0	to	79/10/07 00:03:44.0	
7TRACK.130	79/10/07 00:00:31.0	to	79/12/30 00:20:49.0	
8TRACK.130	79/12/30 00:23:14.0	to	80/02/19 06:30:14.0	
850910.COMET	85/09/10 00:00:16.8	to	85/09/10 23:59:37.9	
850911.COMET	85/09/11 00:00:49.9	to	85/09/11 23:59:23.0	
850912.COMET	85/09/12 00:00:11.0	to	85/09/12 23:59:04.1	
1OLD.100	78/08/16 16:22:12.0	to	80/02/18 23:58:48.0	

\$NCF
\$NOP ***** ICI-IN *****
\$SEXETLISTES

INPUT PARAMETERS ARE: AS SR=1= 1 1

TAPE NO.	FILE NO.	LENGTH
RECORD 1	2048	
0089 680816	56477.1.154117.0	2.2201E+11 3.1E37 ₃ +02 3.6883E+00 1.485E+04 2.1280E+04 04089 78081
6 5E6C1.5	154141.0 2.3911E+01	3.1826E+02 3.8864E+00 2.2756E+04 1.5175E+C4CCES 780816 56646.4
1544J5.1	2.1924E+01	3.1691E+02 3.9231E+02 1.5273E+04 2.1277E+04 2.1601E+04 089 780816 56670.5 154430.5
2.1827E+01	3.1708E+02	3.8740E+00 1.6368E+04 2.2270E+04 2.1277E+04 2.0089 780816 56815.5 15455.0 2.2667E+0
1.3.1509E+02	3.4345E+00	1.6328E+04 2.2257E+04 2.041985 780816 56835.5 1.54715.1 2.1587E+01 2.1687E
+12 3.5781E+00	1.6328E+04	2.2257E+04 2.041985 780816 5684.9 1.54944.1 2.2384E+01 3.1936E+012 3.803
7E+0 1.5832E+04	2.1217E+04	18.9 781816 57.428.8 155.68.1 2.59.1E+01 3.2016E+12 3.7487E+10 2.2
647E+04 1.49502E+04	04089 780816 57154.1 1.55234.0 2.2980E+01 3.1888E+02 3.9626E+00 2.1968E+04 1	
5.618E+04 1.40085.76.816	57176.2 155258.1 2.2204E+01 2.1821E+02 2.8225.9 2.2455E+04 1.5982E+04 C	
6.89 780816	57323.2 155253.0 2.3121E+04 3.1833E+C2 2.7248E+01 2.3435E+04 1.5982E+04 C189 780816	
57346.9 155546.0	2.1946E+01	3.1937.0 2.5244E+02 3.618E+04 1.65662E+04 089 780816 57435.1
15571E+0.0	2.1275E+01	3.1682E+02 3.2312E+06 2.1322E+04 1.6141E+C4CCES 780816 57459.1 155739.0
2.1842E+01	2.1877E+02	3.7658E+06 1.5465E+04 2.3221E+04 1.45089 780816 57483.4 1.5580.0 2.1557E+01
3.2611E+02 3.7335E+05	1.7289E+04 2.3628E+04 2.89 780816 57575.6.0 155515.0 2.2230E+01 3.1523E+02 4.00E2	
C2 3.7941E+00 1.5611E+04	2.1967E+04 2.2803E+04 0.089 780816 5758.1 155940.0 2.2045E+01 3.1728E+02 4.00E2	
E+00 1.6355E+04 2.1001E+04	0.0085 780816 57604.1 1.60004.0 2.1322E+01 3.1677E+02 3.747E+00 1.61	
15E+0.4 6.688E+04 040089 780816 57749.4 1.60229.0 2.2846E+01 3.1864E+12 3.90275+03 2.2441E+04 1.6851E+040.4		
85 780816 57773.4 1.60253.6 2.2878E+01 3.0.1962E+02 3.7745E+00 1.7066E+04 2.3032E+040.089 780816		
57757.5 1602317.7 2.1570E+01	2.2297E+01 2.3.4113E+00 2.2749E+01 1.6814E+04 040089 780816 57821.9 1	
6.341.3 2.1813E+01	3.2335E+02 3.2756E+02 1.5986E+04 2.2356E+04	

***** JOB DONE.

\$KECLPS

85

\$\$ \$NCF
\$NCF

\$NOP *****8 IC1-IN *****
\$NOP *EXE TFLIST ES

INPUT PARAMETERS ARE: AS SR=5451=1 1 17

TAPE NO.	FILE NO.	LENGTH
RECORD 5451	17	2548
0085 921006	86287.7	235807.0
6 86311.0	1.4886E+01	3.7159E+01
4 23585.5	2.4049E+11	3.7071E+32
10 2.3759E+01	3.7116E+02	-1.3802E+00
11 1.37166E+02	-1.6932E+03	6.4787E+34
12 +E 2.-1.4358E+00	E.8213E+04	E.4316E+04
2 8E+00 7.0189E+14	5.5063E+04	989 791107
14 617E+04	E.8886E+04	0089 791007
15 255E+04	224.3	344.0
16	2.4302E+01	2.4304E+02
17	3.7044E+01	3.7044E+02
18	1.6863E+00	1.6863E+00
19	6.4415E+04	6.4415E+04

***** JCB ECNE.
\$WEO LPS

SASS IN HTC
\$EXE TFLIST ES

\$ACF *****\$SNOP *****\$EXEC TPLIST BS *****IC2IN *****

INPUT PARAMETERS ARE: AS FL=1 E=1 1 1 2

TAPE NO. 1 E/E NO. 1

TAPE NO. 1 EDITION NO. -

RECORD	6550	LENGTH	2348
JF85791234	788•4	1358•4	6•2248E+02
	1332•0	6•2447E+19	4•5111E+02
	6•1099E+04	4•5054E+02	4•6122E+01
	6•5651E+00	4•4877E+02	-1•7696E+01
	0•45430E+02	-3•8367E-01	1•3937E+05
	+0•22	-7•2441E-01	1•0232E+05
7E-01	6•4313E+04	1•9716E+05	0•89791230
	824E+04	6•6614E+040089791230	11193•7
	•6078E+140089791230	11127•8	1847•1
	1176•3	1152•2	1912•5
	2500•0	7•0300E+00	6•4533E+00
	4•5779E+02	-1•4933E+00	1•1728E+35
7•0327E+00	4•5334E+02	-9•15564E+02	-1•4654E+00
	4•	1•	1•

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\$NOP
\$NCF
\$NCF
\$NOP ***** IC2IN *****
\$SEXETPLIST BS

TAPE NO. 1 FILE NO. π
 RECORD 1 LENGTH 2^{+8}
 1394.6 2314.0 9.5545E+.0 4.4959E+.02 -4.07941E+.04 9.5803E+.04 7.1873E+.04 6.4608E+.04 79123

ISEE-3

168 SEC. SOLAR WIND ELECTRON MOMENTS

78-079A-010

THIS DATA SET CONSISTS OF THREE 9-TRACK, ASCII, 6250 BPI TAPES. THEY WERE CREATED ON THE VAX 11/780 COMPUTER. THIS DATA SET CONTAINS SOLAR WIND ELECTRON DATA FOR ISEE-3. EACH TAPE HAS A VOLUME LABEL, (WHICH CAN BE FOUND BELOW) AS WELL AS EACH DATA FILE HAVING A HEADER AND TRAILER ASSOCIATED WITH IT. THE D AND C NUMBERS ALONG WITH THEIR TIME SPANS ARE AS FOLLOW:

D#	C#	VOLLABEL	FILES	TIMESPAN
D-79739	C-27251	IC3OLD	3	02/27/80-10/16/82
D-78954	C-27758	EXICE	2	12/22/83-04/30/86
D-086454	C-031230	ICENEW	74	05/01/86-06/30/92

Directory of ICENEW: (Label name of tape)

8605.ICE;1	8606.ICE;1	8607.ICE;2	8608.ICE;1
8609.ICE;1	8610.ICE;1	8611.ICE;1	8612.ICE;1
701.ICE;1	8702.ICE;1	8703.ICE;2	8704.ICE;1
8705.ICE;1	8706.ICE;1	8707.ICE;1	8708.ICE;1
8709.ICE;2	8710.ICE;2	8711.ICE;2	8712.ICE;1
8801.ICE;1	8802.ICE;2	8803.ICE;1	8804.ICE;1
8805.ICE;2	8806.ICE;1	8807.ICE;1	8808.ICE;2
8809.ICE;2	8810.ICE;1	8811.ICE;2	8812.ICE;2
8901.ICE;1	8902.ICE;1	8903.ICE;1	8904.ICE;1
8905.ICE;1	8906.ICE;1	8907.ICE;1	8908.ICE;1
8909.ICE;1	8910.ICE;2	8911.ICE;1	8912.ICE;1
9001.ICE;1	9002.ICE;1	9003.ICE;1	9004.ICE;1
9005.ICE;1	9006.ICE;2	9007.ICE;1	9008.ICE;1
9009.ICE;1	9010.ICE;1	9011.ICE;1	9012.ICE;1
9101.ICE;1	9102.ICE;1	9103.ICE;1	9104.ICE;1
9105.ICE;1	9106.ICE;1	9107.ICE;2	9108.ICE;1
9109.ICE;1	9110.ICE;2	9111.ICE;1	9112.ICE;1
9201.ICE;1	9202.ICE;1	9203.ICE;1	9204.ICE;1
9205.ICE;1	9206.ICE;1		

Total of 74 files.

78-079A-010

D-77739

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

DATE: 3 August 1989
IN REPLY REFER TO: SST-8-89:7-782
MAIL STOP: D438
TELEPHONE: (505)667-5389

(010)

Dr. Sumant Krishnaswamy
Code 633
NSSDC
NASA/Goddard Space Flight Center
Greenbelt, MD 20771

Dear Sumant:

Under separate cover I am sending you one magnetic tape containing high temporal resolution solar wind electron moments derived from measurements obtained by the Los Alamos electron experiment on ISEE-3 and covering the time interval from 2/27/80 through 10/16/82. The tape contains 3 files, one for each of the (partial) years 1980, 1981, 1982. The temporal resolution of these data is usually approximately 168 secs. Each data record in these files contains the date (yyymmdd), the time in seconds, the UT time (hhmmss), the electron density, the bulk flow speed, the bulk flow azimuth, the minimum total temperature (tper), the maximum total temperature (tpar), the angle of maximum temperature, the heat flux and the heat flux azimuth. These moments and the sign conventions and such are as for the electron data from ISEE-3 previously submitted to you by Los Alamos. I am enclosing a sample listing of the data with the read format and other information indicated.

Please contact me (Ph: 505-667-5389; SPAN: ESSDP1::073500) if you have any questions concerning this submission.

Sincerely,


J. T. Gosling

JTG:mm

Enc. a/s

Cy: T. Von Rosenvinge, Code 611, NASA/GSFC
R. Wales, Code 602, NASA/GSFC
CRM-4(2)/A150

78-0714-024

(Cont.)

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

DATE: 29 August 1989
IN REPLY REFER TO: SST-8-89:7-782
MAIL STOP: D438
TELEPHONE: (505)667-5389

Dr. Suman Krishnaswamy
Code 633
NSSDC
NASA/Goddard Space Flight Center
Greenbelt, MD 20771

Dear Sumant:

Under separate cover I am sending you one magnetic tape containing high temporal resolution solar wind electron moments derived from measurements obtained by the Los Alamos electron experiment on ISEE-3 (ICE) and covering the time interval from 12/23/83 through 4/30/86. The tape contains 2 files, one for the 1983, 1984 data and one for the 1985, 1986 data. The temporal resolution of these data is usually approximately 168 secs. Each data record in these files contains the date (yyymmdd), the time in seconds, the UT time (hhmmss), the electron density, the bulk flow speed, the bulk flow azimuth, the minimum total temperature (tper), the maximum total temperature (tpar), the angle of maximum temperature, the heat flux and the heat flux azimuth. These moments and the sign conventions and such are as for the electron data from ISEE-3 previously submitted to you by Los Alamos. I am enclosing a sample listing of the data with the read format and other information indicated.

Please contact me (Ph: 505-667-5389; SPAN: ESSDP1::073500) if you have any questions concerning this submission.

Sincerely,

[Signature]

J. T. Gosling

JTG:mm

Enc. a/s

Cy: T. Von Rosenvinge, Code 611, NASA/GSFC
R. Wales, Code 602, NASA/GSFC
CRM-4(2)/A150

NSSDC DATA SET 78-079A-010

Tape labels, file names, and file sizes

SPACECRAFT: ISEE-3/ICE

DATA SET NAME: SOL. WIND ELECTRON MOM. (168-SEC)

SOURCE: DR. J. T. GOSLING
MS-D438, LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NM 87545
Phone: 505-667-5389
e-mail (SPAN): ESSDP1::073500

TIME SPAN: 27Feb80-16Oct82 and 23Dec83-30Apr86

QUANTITY: 2 tapes

TAPE MEDIUM AND DENSITY: 9-track, 6250 BPI

TAPE FORMAT: ASCII, VAX STANDARD LABELLED TAPES

TAPE BLOCK SIZE: 32768 Bytes (1980-82 data tape, label="IC3OLD")
2048 Bytes (1983-86 data tape, label="EXICE")

DATA FORMAT: See cover letter from J. T. Gosling

Tape Label	Data File Name	Data File Size			
		Tape blocks/VAX blocks/MBy/lines			
IC3OLD	IC3OLD.80	496	/	31206	/ 16 / 253604
	IC3OLD.81	529	/	33285	/ 17 / 270500
	IC3OLD.82	383	/	24186	/ 12 / 196066
EXICE	VX8384.IC	6325	/	24902	/ 12 / 202376
	VX8586.IC	2678	/	10543	/ 5 / 85680

Notes:

1. Since these are standard labelled tapes, each data file has a header file and a trailer file associated with it.
2. On a VAX, to copy (e.g.) file IC3OLD.80 from tape to a disk file with the same name, do:

```
$ ALLOCATE <dev_name>
$ MOUNT <dev_name>: IC3OLD
$ COPY <dev_name>:IC3OLD.80 *.*
```

This will require 31,206 VAX blocks on disk, and will create an ASCII file consisting of 253,604 lines of data.

18-079A-010

To copy all the files from (e.g.) tape IC3OLD to disk, do:

```
$ ALLOCATE <dev_name>
$ MOUNT <dev_name>:    IC3OLD
$ COPY <dev_name>:.*   .*
```

This will require about 89,000 VAX blocks.

Data File	Time Span		
	YY/MM/DD hh:mm:ss.s	to	YY/MM/DD hh:mm:ss.s
IC3OLD.80	80/02/01 00:10:56.0	to	80/12/31 23:59:54.0
IC3OLD.81	81/01/01 00:04:06.0	to	81/12/31 23:57:20.0
IC3OLD.82	82/01/01 02:52:15.0	to	82/10/16 23:59:50.0
VX8384.IC	83/12/22 00:05:07.0	to	84/12/31 11:46:31.0
VX8586.IC	85/01/01 02:16:56.0	to	86/04/30 18:24:28.0

NSSDC data set 78-079A-010

ISEE-3, "Solar wind electron moments (168-sec)"

These data have been supplied by Dr. J. T. Gosling, Los Alamos National Laboratory and contain high temporal resolution solar wind electron moments derived from measurements obtained by the Los Alamos electron experiment on the ISEE-3/ICE spacecraft. The ion instrument on ISEE-3 failed on 1980-Feb-26 so no proton data are available from this instrument after that date.

The temporal resolution of these data is usually approximately 168 seconds. Each data record (2 lines) contains

- 1) the date (YYMMDD),
- 2) the time in seconds from start of day (SSSSS.S),
- 3) the UT time of day in HHMMSS.0,
- 4) the electron density (cm^{-3}),
- 5) the bulk flow speed (km/s),
- 6) the bulk flow azimuth (GSE+180 degrees),
- 7) the minimum total temperature (T_{perp} , deg K),
- 8) the maximum total temperature (T_{par} , deg K),
- 9) the angle of maximum temperature (degrees, 135=Parker spiral angle)
- 10) the heat flux ($\text{erg cm}^{-2} \text{ sec}^{-1}$),
- 11) the heat flux azimuth (degrees, 0=antisunward, 90=towards dawn)

Format:

```
READ(1,1000) IYYMMDD,SEC,UTIME,(PLASMA(I),I=1,8)
1000 FORMAT(1X, I6, 1X, 2(F8.1,1X), 5(1PE11.4,1X) / 3(1PE11.4,1X))
```

Example (data for second 86103.0 [23:55:03.0 UT] on 1982-jan-30):

```
820130 86103.0 235503.0 2.4347E+00 6.2305E+02 9.0099E-01 1.3549E+05 2.234
6.8713E+01 1.0535E-02 2.4814E+02
```

Note that the first line of each time sample is 85 characters long, and the second line is 35 characters long.

Bulk flow speed and azimuth (parameters 5 and 6)

The plasma bulk flow speed is measured relative to the spacecraft and the bulk flow azimuth is measured positive from the (spacecraft-centered) solar ecliptic (SE) -X direction toward the SE -Y direction, i.e., 0 degrees corresponds to antisunward flow and positive flow angles correspond to flow towards dawn (+90

deg), and negative flow angles correspond to flow towards dusk (-90 deg). Thus,

antisunward = 0 deg = -GSEX
 toward dawn = +90 deg = -GSEY
 sunward flow= 180 deg = +GSEX
 toward dusk = -90 deg = +GSEY

Z-axis = spacecraft spin axis direction, North

The spacecraft spin axis was maintained within 0.5 degree of perpendicular to the ecliptic.

T-max azimuth (parameter 9)

The Tmax azimuth ranges from 0 to 180 degs with 0 and 180 degs corresponding to alignment with the sun-spacecraft line and 135 degs corresponding to the nominal Parker field spiral angle at 1 AU.

The alignment of the maximum temperature angle with the magnetic field is usually within 15 degrees. The electron temperature maximum is aligned perpendicular to the field about 2% of the time in the solar wind. See papers by J.L. Phillips et al. in JGR 1989, 1990.

Heat flux azimuth (parameter 11)

Plasma heat flux azimuth (where available) is similar to the velocity azimuth, but it is measured from 0 to 360 degrees, i.e., 0 and 360 degrees correspond to heat flux directed antisunward, 180 degrees corresponds to sunward heat flux, 90 degrees corresponds to a heat flux directed toward dawn, and 270 degrees corresponds to a heat flux directed toward dusk. Thus,

antisunward = 0,360 deg = -GSEX
 toward dawn = 90 deg = -GSEY
 sunward flux= 180 deg = +GSEX
 toward dusk = 270 deg = +GSEY

Data gaps

There should be no gaps in the period 2/27/80 to 10/16/82 other than gaps caused by the tracking of the satellite. In particular the coverage for 1981 should be complete.

The above is based on information provided by Jack Gosling [(505)-667-5389 or ESSDP1::073500].

7f-079A-01φ

For a description of the Los Alamos instrument on the ISEE-3/ICE spacecraft, see: Bame, S.J., J.R. Asbridge, H.E. Felthauser, J.P. Glore, H.L. Hawk, and J. Chavez, ISEE-C solar wind plasma experiment, IEEE Trans. Geosci. Electron., GE-16, 160-162, 1978.

Sample data:

800903	57496.0	155816.0	1.4578E+01	3.3251E+02	-2.9403E+00	1.4322E+05	1.495
	2.2401E+01	6.4832E-03	3.0175E+01				
800903	57664.0	160104.0	1.9349E+01	3.5261E+02	-8.1859E-01	1.4237E+05	1.490
	6.2787E+01	7.5793E-03	5.4529E+01				
800903	57832.0	160352.0	1.9267E+01	3.2572E+02	-3.7215E+00	1.4167E+05	1.482
	2.3784E+01	4.3320E-03	1.7034E+01				
800903	57999.0	160639.0	2.1625E+01	3.2027E+02	-1.8146E+00	1.4019E+05	1.460
	1.3498E+01	3.0838E-03	9.9463E+00				

See also Russell and Petrinec

GRL, 19, No. 10, 961-963, May 22, 1992

ASCII LIST OF KM2005

RECORD 1 80 BYTES

VOL1ICENEW ← [global name]

1

ESTI LITTE OE KM300

RECORD 5 80 BYTES

四

2

ASCII LIST OF KM2005

RECORD 1 0010 20255

ASCII LIST OF KM2005

卷之三

ASCII LIST OF KM2005

RECORD 1 OF 20 SITES

EOF18605.ICE

ICENEW00010001000100 92202 00000 000108DECFILE11A

ASCII LIST OF KM2005

FILE 3	RECORD 4	80 BYTES
EOF4		00

ASCII LIST OF KM2005

FILE 4	RECORD 1	80 BYTES
HDR18606.ICE	ICENEW00010002000100 92202 00000 00000DECFILE11A	

ASCII LIST OF KM2005

FILE 4	RECORD 4	80 BYTES
HDR4		00

ASCII LIST OF KM2005

FILE 5 RECORD 1 2048 BYTES

0089 860601 23112.0 62512.0 6.6022E+00 3.2095E+02 -9.4919E+00 8.5643E+00 8.7887E+0400039 8.3569E+00 1.0785E-03 1.2668E+010089	860601 23447.8 63047.0 6.7698E+00 3.2771E+02 -9.7611E+00 8.4112E+04 8.8324E+0400039 1.7829E+02 9.5231E-04 1.2933E+010089 860	601 23783.7 63623.0 6.5615E+00 3.2109E+02 -9.6269E+00 8.4391E+04 9.0434E+0400039 1.5295E+01 8.6415E-04 1.1599E+010089 860601	24119.5 64159.0 6.5096E+00 3.2132E+02 -9.8466E+00 8.5112E+04 9.0960E+0400039 5.0461E+00 1.0648E-03 1.3351E+010089 860601 244	55.4 64735.0 6.5736E+00 3.1924E+02 -9.1674E+00 8.5504E+04 9.0594E+0400039 1.2087E+01 7.7024E-04 1.9365E+010089 860601 25798.8	70958.0 1.0674E+01 3.0493E+02 -1.0725E+01 8.3201E+04 8.6588E+0400039 1.7718E+02 4.8266E-04 3.4504E+020089 860601 26134.6 71	534.0 1.0882E+01 3.1084E+02 -1.0098E+01 8.3874E+04 8.7467E+0400039 1.6087E+02 1.9397E-04 2.0964E+010089 860601 26470.5 72110.	0 1.0820E+01 2.9868E+02 -1.1316E+01 8.3513E+04 8.5743E+0400039 1.6098E+02 5.1124E-04 3.4782E+020089 860601 26806.3 72646.0 1	.0583E+01 3.0149E+02 -9.5098E+00 8.3393E+04 8.6024E+0400039 1.5208E+02 4.7279E+04 3.2674E+020089 860601 27142.2 73222.0 1.072	0E+01 3.0702E+02 -1.0656E+01 8.3380E+04 8.6450E+0400039 1.6676E+02 4.4678E-04 3.2317E+020089 860601 27478.0 73758.0 1.1067E+01	1 2.9936E+02 -1.0987E+01 8.2515E+04 8.4681E+0400039 1.6583E+02 8.7029E-04 3.4327E+020089 860601 27813.9 74333.0 1.1245E+01 3
---	--	--	--	---	---	---	--	---	--	--

$-0.433E+02 -1.2036E+01 8.3447E+04 8.4069E+04 8.4069E+04 8.3447E+04$
 $8.3360E+04 8.4498E+04 8.4498E+04 8.3360E+04 8.3087E+04 8.3087E+04$
 $8.4820E+04 8.7454E+02 8.7454E+02 8.4820E+04 8.3799E+04 8.3799E+04$
 $8.6676E+02 8.8733E+04 8.8733E+04 8.6676E+02 8.2973E+00 8.2973E+00$
 $1.9868E-04 1.9868E-04 1.9868E-04 1.9868E-04 3.5738E+02 3.5738E+02$
 $6.1558E-04 6.1558E-04 6.1558E-04 6.1558E-04 1.297E+01 1.297E+01$
 $1.6609E+02 1.6609E+02 1.6609E+02 1.6609E+02 1.297E+01 1.297E+01$
 $6.2831E-04 6.2831E-04 6.2831E-04 6.2831E-04 1.297E+01 1.297E+01$
 $1.2297E+01 1.2297E+01 1.2297E+01 1.2297E+01 1.297E+01 1.297E+01$
 $6.7544E-06 6.7544E-06 6.7544E-06 6.7544E-06 1.297E+01 1.297E+01$
 $2.8485E+00 2.8485E+00 2.8485E+00 2.8485E+00 1.297E+01 1.297E+01$
 $3.4485E+02 3.4485E+02 3.4485E+02 3.4485E+02 1.297E+01 1.297E+01$
 $4.0610E-04 4.0610E-04 4.0610E-04 4.0610E-04 1.297E+01 1.297E+01$
 $3.4485E+02 3.4485E+02 3.4485E+02 3.4485E+02 1.297E+01 1.297E+01$
 $8.1708E+00 8.1708E+00 8.1708E+00 8.1708E+00 1.297E+01 1.297E+01$
 $2.9829E+00 2.9829E+00 2.9829E+00 2.9829E+00 1.297E+01 1.297E+01$
 $3.1832E+02 3.1832E+02 3.1832E+02 3.1832E+02 1.297E+01 1.297E+01$
 $8.1708E+01 8.1708E+01 8.1708E+01 8.1708E+01 1.297E+01 1.297E+01$
 $3.1832E+02 3.1832E+02 3.1832E+02 3.1832E+02 1.297E+01 1.297E+01$
 $3.1832E+02 3.1832E+02 3.1832E+02 3.1832E+02 1.297E+01 1.297E+01$
 $8.2244E+00 8.2244E+00 8.2244E+00 8.2244E+00 1.297E+01 1.297E+01$
 $3.1018E+01 3.1018E+01 3.1018E+01 3.1018E+01 1.297E+01 1.297E+01$
 $3.1498E+02 3.1498E+02 3.1498E+02 3.1498E+02 1.297E+01 1.297E+01$

ASCII LIST OF KM2005

FILE 5 RECORD 90 2048 BYTES

ASCII LIST OF KM2005

FILE 6 RECORD 1 80 BYTES

CENEW00010002000100 92202 00000 0000090DECE11E11A

ASCII LIST OF KM2005

FILE 6 RECORD 4 80 BYTES

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INPUT - JIN - 2

D-79739

- * Can only see copied on the Vax or IBM.
- * Cannot use MODCOMP because of huge record size of 32768.

```

FILE 1 HAS    2 RECS, <MINREC SIZE= 80> <MAXREC SIZE= 80>
FILE 2 HAS    490 RECS, <MINREC SIZE= 80> <MAXREC SIZE= 80>
FILE 3 HAS    4 RECS, <MINREC SIZE= 80> <MAXREC SIZE= 80>
FILE 4 HAS    4 RECS, <MINREC SIZE= 80> <MAXREC SIZE= 80>
FILE 5 HAS    329 RECS, <MINREC SIZE= 80> <MAXREC SIZE= 80>
FILE 6 HAS    4 RECS, <MINREC SIZE= 80> <MAXREC SIZE= 80>
FILE 7 HAS    4 RECS, <MINREC SIZE= 80> <MAXREC SIZE= 80>
FILE 8 HAS    583 RECS, <MINREC SIZE= 80> <MAXREC SIZE= 80>
FILE 9 HAS    4 RECS, <MINREC SIZE= 80> <MAXREC SIZE= 80>
FILE LOGICAL END-UP-TAPE DETECTED.
END OF FORMATTED DIRECTORY OPERATION...

```

TOTAL OF 1455 RECORDS IN 9 FILE(S).

SMALLEST RECORD LENGTH IS 80 BYTES.

LARGEST RECORD LENGTH IS 32768 BYTES.

9

103
103

7

889 800201 024+ 1.544+0 1.404E+0 1.025E+0 1.277E+00 4.47745E+U2 -E+9144E+00 1.3801E+U5 2.02975E+U5 1.2755E+U5 5.0365E+020089
 800201 1.622+0 1.2575E+U0 4.0708E+U2 1.40893E+U1 1.4096E+U0 1.3803E+U5 2.0952E+U2 1.05059 1.4099E+U2 3.2255E+U5 5.0365E+020089 800
 1.412+5 2.332+0 1.3805E+U0 4.0729E+U2 1.2469E+U0 1.2469E+U5 2.4385E+U5 1.4185E+02 4.4916E+05 3.2269E+020089 800201 15
 80.4 2620.0 1.5135E+U0 3.6849E+U2 6.2342E+U0 1.4144E+U5 2.3993E+U5 1.50059 1.3996E+U2 3.5882E+U5 3.1645E+020089 800201 1.746.3
 2908.0 1.44572E+U0 4.1153E+U2 4.0077E+U0 1.1509E+U5 2.5191E+U5 1.2918E+U2 5.2799E+U5 3.0896E+020089 800201 1.916.2 3
 156.0 1.4397E+U0 4.0553E+U2 1.0925E+U1 1.2510E+U5 2.1992E+U5 1.05059 1.20183E+U2 5.0913E+U5 2.9531E+020089 800201 2.084.2 3444.
 0 1.5764E+U0 4.2754E+U2 2.0482E+U0 1.1966E+U5 2.5767E+U5 1.2021E+U2 5.5788E+U5 3.0197E+020089 800201 2.2252.1 3732.
 * 4223F+0 4.2740E+U0 1.2662E+U0 1.2662E+U5 2.5767E+U5 1.2050059 1.1591E+U2 4.9563E+U5 2.9255E+020089 800201 2.420.0 1.366
 7E+00 4.1821E+U0 1.2949E+U5 2.962L+U5 1.2554E+U2 5.0086E+U5 3.0345E+020089 800201 2.587.9 4307.0 1.3669E+0
 0 4.1755E+U2 2.5353E+U5 2.5455E+U5 1.1252E+U2 3.5906E+U5 2.9730E+020089 800201 2.755.9 4555.0 1.4054E+00 4
 * 4802F+0 2.2473/9E+U1 1.2783E+U5 2.2473/9E+U1 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 2.925.8 4843.0 1.4695E+U0 4
 TE+02 1.7641E+U0 1.2422E+U5 2.5101E+U5 1.1743E+U2 5.4571E+U5 2.9553E+020089 800201 3.091.7 5151.0 1.3454E+U0 4.1877E+0
 2.2.2.2.1.611E+U0 1.1996E+U2 3.5202E+U5 1.1996E+U5 3.0231E+020089 800201 3259.6 5419.0 1.5894E+U0 4.5219E+02 1
 * 2403F+0 1.5426E+U5 2.5904E+U5 2.5904E+U5 1.2143E+U2 3.3974E+U5 2.9619E+020089 800201 3427.6 5707.0 1.3823E+U0 4.1440E+U2 5.243
 4E+01 1.3696E+U5 2.5353E+U5 2.2483E+U5 1.2255E+U2 5.2483E+U5 2.9849E+020089 800201 3595.5 5955.0 1.5006E+U0 4.1790E+U2 1.2858E+0
 0 1.4563E+U5 2.4536E+U5 2.3616E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 3765.4 1.5751E+U0 4.2827E+U2 9.4180E-01 1
 * 5208F+0 2.4016E+U5 2.4016E+U5 2.4016E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 3931.3 1.5531.0 1.3545E+U0 4.1877E+0
 1E+05 2.4967E+U5 2.4967E+U5 2.4967E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 4.1839E+U0 2.0545E-01 1.4458E+U
 5 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 5.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 6.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 7.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 8.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 9.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 10.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 11.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 12.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 13.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 14.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 15.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 16.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 17.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 18.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 19.5419.0 1.5894E+U0 4.5219E+02 1
 8E+05 2.4457E+U5 2.4457E+U5 2.4457E+U5 1.05059 1.2019E+U2 4.6488E+U5 2.9626E+020089 800201 20.5419.0 1.5894E+U0 4.5219E+02 1

$$4 \cdot 7009E-05 \cdot 2 \cdot 941/t + 0 \cdot 00089 \cdot 000201 \cdot 1400/-v \cdot 3535 \cdot t + 0 \cdot 2022t + 00 \cdot 4 \cdot 1405t + v2 \cdot -5 \cdot 0623t + v0 \cdot 1 \cdot 2726t + v5 \cdot < 9299t + v50039 \cdot 1 \cdot 0654t + v2 \cdot 5 \cdot 6855t$$

$$9 \cdot 12E-03 \cdot 2 \cdot 8446t + v20087 \cdot 000201 \cdot 14175 \cdot v \cdot 35615 \cdot 0 \cdot 1 \cdot 25902t + v0 \cdot 4 \cdot 5453t + v2 \cdot -5 \cdot 0623t + v0 \cdot 1 \cdot 3409t + v0 \cdot 2 \cdot 7452t + v5 \cdot 0 \cdot 0855t + v2 \cdot 5 \cdot 6855t$$

$$- \cdot 03 \cdot 2 \cdot 80554E + v200089 \cdot 000201 \cdot 14545 \cdot v \cdot 3593 \cdot 0 \cdot 1 \cdot 4492t + v0 \cdot 4 \cdot 4611t + v2 \cdot -3 \cdot 04495t + v0 \cdot 1 \cdot 4942t + v0 \cdot 2 \cdot 126t + v0 \cdot 3507E + v1 \cdot 6 \cdot 3765E - v3$$

$$\int 2 \cdot 7165E + v200089 \cdot 000201 \cdot 14511 \cdot 0 \cdot 40151 \cdot 0 \cdot 1 \cdot 0094E + v0 \cdot 4 \cdot 3290t + v2 \cdot -2 \cdot 0506t - v2 \cdot 1 \cdot 4918t + v5 \cdot 2 \cdot 9103t + v50039 \cdot 1 \cdot 1019E + v2 \cdot 6 \cdot 02525E - v3 \cdot 2$$

$$8789E + v200089 \cdot 000201 \cdot 14676 \cdot v \cdot 40428 \cdot 0 \cdot 1 \cdot 30309 \cdot v + 0 \cdot 4 \cdot 0295t + v2 \cdot -3 \cdot 0626t + v0 \cdot 1 \cdot 55061t + v5 \cdot 2 \cdot 6103t + v50039 \cdot 8 \cdot 7454E + v1 \cdot 5 \cdot 6162E - v3 \cdot 2 \cdot 6697$$

$$E + v20084 \cdot 000201 \cdot 14646 \cdot v \cdot 40726 \cdot 0 \cdot 1 \cdot 5775 \cdot v + 0 \cdot 4 \cdot 4922t + v2 \cdot -7 \cdot 0658t + v0 \cdot 1 \cdot 5774t + v5 \cdot 2 \cdot 2678t + v50039 \cdot 8 \cdot 6745t + v1 \cdot 4 \cdot 8962E - v3 \cdot 2 \cdot 6535E + v2$$

$$0089 \cdot 000201 \cdot 15014 \cdot 0 \cdot 41014 \cdot 0 \cdot 1 \cdot 7257E + v0 \cdot 4 \cdot 9522t + v2 \cdot -9 \cdot 5073t + v0 \cdot 1 \cdot 5857E + v5 \cdot 2 \cdot 5345E + v50039 \cdot 9 \cdot 9394E + v1 \cdot 5 \cdot 1718E - v5 \cdot 2 \cdot 7740E + v200089$$

$$800201 \cdot 15182 \cdot 0 \cdot 41302 \cdot 0 \cdot 1 \cdot 2708t + v0 \cdot 4 \cdot 4774t + v2 \cdot -3 \cdot 0842t + v0 \cdot 1 \cdot 5603t + v5 \cdot 2 \cdot 0592t + v50039 \cdot 1 \cdot 0795E + v2 \cdot 5 \cdot 1556E - v3 \cdot 2 \cdot 9034E + v200089 \cdot 800$$

$$201 \cdot 1535 \cdot v + 0 \cdot 41550 \cdot v + 0 \cdot 1 \cdot 7153t + v0 \cdot 4 \cdot 2599E + v2 \cdot -5 \cdot 0509t + v5 \cdot 2 \cdot 0822E + v50039 \cdot 1 \cdot 12515E + v2 \cdot 5 \cdot 5771E - v3 \cdot 0 \cdot 2452E + v200089 \cdot 800201 \cdot 156$$

$$15516 \cdot 0 \cdot 41658 \cdot 0 \cdot 1 \cdot 5216t + v0 \cdot 4 \cdot 3006t + v2 \cdot -6 \cdot 0255t + v5 \cdot 2 \cdot 6835t + v50039 \cdot 1 \cdot 1272E + v2 \cdot 6 \cdot 0409E + v200089 \cdot 800201 \cdot 156$$

$$88 \cdot 0 \cdot 42126 \cdot 0 \cdot 1 \cdot 7401t + v0 \cdot 4 \cdot 4417t + v2 \cdot -6 \cdot 0657E - v1 \cdot 1 \cdot 5812t + v5 \cdot 2 \cdot 0508t + v50039 \cdot 1 \cdot 1622E + v2 \cdot 5 \cdot 1609E - v5 \cdot 2 \cdot 9016E + v200089 \cdot 800201 \cdot 156$$

$$42414 \cdot 0 \cdot 1 \cdot 0020E + v0 \cdot 4 \cdot 35575t + v2 \cdot -4 \cdot 2903E + v0 \cdot 1 \cdot 0892E + v50039 \cdot 1 \cdot 1189E + v2 \cdot 4 \cdot 786UE - v3 \cdot 2 \cdot 8979E + v200089 \cdot 800201 \cdot 16022 \cdot 0 \cdot 42$$

$$702 \cdot 0 \cdot 1 \cdot 0354E + v0 \cdot 4 \cdot 3998E + v2 \cdot -4 \cdot 2903E + v0 \cdot 1 \cdot 0892E + v50039 \cdot 1 \cdot 1189E + v2 \cdot 4 \cdot 786UE - v3 \cdot 2 \cdot 8979E + v200089 \cdot 800201 \cdot 16190 \cdot 0 \cdot 42950$$

$$0 \cdot 1 \cdot 5964E + v0 \cdot 4 \cdot 35454E + v2 \cdot -4 \cdot 2459E + v0 \cdot 1 \cdot 05115E + v0 \cdot 4 \cdot 0272E + v50039 \cdot 1 \cdot 0175E + v2 \cdot 5 \cdot 9636E + v200089 \cdot 800201 \cdot 163558 \cdot 0 \cdot 1$$

$$- 78688t + v0 \cdot 4 \cdot 3530E + v0 \cdot 4 \cdot 20525E + v0 \cdot 1 \cdot 0245E + v50039 \cdot 1 \cdot 0245E + v2 \cdot 5 \cdot 9045E + v200089 \cdot 800201 \cdot 16915E + v2 \cdot 5 \cdot 9729E + v200089 \cdot 800201 \cdot 156$$

$$1 \cdot t + 00 \cdot 4 \cdot 4600t + v0 \cdot 4 \cdot 4220t + v0 \cdot 1 \cdot 2225t + v5 \cdot 2 \cdot 4505L + v50039 \cdot 1 \cdot 0671E + v2 \cdot 5 \cdot 4219E - v3 \cdot 2 \cdot 8750E + v200089 \cdot 800201 \cdot 16694 \cdot 0 \cdot 45814 \cdot 0 \cdot 1 \cdot 7336E + v0$$

$$0 \cdot 4 \cdot 1543t + v2 \cdot -7 \cdot 5549E + v0 \cdot 1 \cdot 02525t + v5 \cdot 2 \cdot 0332E + v50039 \cdot 1 \cdot 0318E + v2 \cdot 6 \cdot 6709E - v3 \cdot 2 \cdot 8412E + v200089 \cdot 800201 \cdot 16861 \cdot 0 \cdot 44101 \cdot 0 \cdot 1 \cdot 7960E + v0 \cdot 4$$

$$\cdot 2854t + v2 \cdot -c \cdot 4500E + v0 \cdot 1 \cdot 4898E + v5 \cdot c \cdot /117t + v50039 \cdot 1 \cdot 11014t + v2 \cdot 7 \cdot 3288t - v5 \cdot 2 \cdot 8887E + v200089 \cdot 800201 \cdot 17029 \cdot v \cdot 44349 \cdot 0 \cdot 1 \cdot 9162E + v0 \cdot 4 \cdot 2558$$

$$3E + 02 \cdot -7 \cdot 3859E + v0 \cdot 1 \cdot 4105E + v5 \cdot c \cdot /763t + v50039 \cdot 1 \cdot 1541E + v2 \cdot 7 \cdot 5355E - v5 \cdot 2 \cdot 9336E + v200089 \cdot 800201 \cdot 1719 \cdot v \cdot 44637 \cdot 0 \cdot 1 \cdot 7521t + v0 \cdot 4 \cdot 2196E + v0$$

$$2 \cdot 2 \cdot 530t - v1 \cdot 1 \cdot 4948t + v5 \cdot c \cdot /3044E + v50039 \cdot 1 \cdot 1095E + v2 \cdot 5 \cdot 8222E - v5 \cdot 2 \cdot 9045E + v200089 \cdot 800201 \cdot 17365 \cdot v \cdot 44925t + v0 \cdot 1 \cdot 05808E + v0 \cdot 4 \cdot 4535E + v200089 \cdot 800201 \cdot 1683$$

$$\cdot 64148t + v0 \cdot 1 \cdot 4446E + v5 \cdot c \cdot /65448E + v50039 \cdot 1 \cdot 1130t + v2 \cdot 6 \cdot 4245t + v5 \cdot 2 \cdot 8091E + v200089 \cdot 800201 \cdot 17785 \cdot v \cdot 45625 \cdot 0 \cdot 1 \cdot 6223E + v0 \cdot 4 \cdot 914E + v2 \cdot -8 \cdot 636$$

$$4E + 00 \cdot 1 \cdot 4541E + v5 \cdot c \cdot /704t + v50039 \cdot 1 \cdot 2042E + v2 \cdot 6 \cdot 7500E - v5 \cdot 2 \cdot 9925E + v200089 \cdot 800201 \cdot 17953 \cdot v \cdot 45913 \cdot 0 \cdot 1 \cdot 5987E + v0 \cdot 4 \cdot 1196E + v2 \cdot 5 \cdot 0828E + v0$$

$$0 \cdot 1 \cdot 4651t + v5 \cdot c \cdot /57t + v50039 \cdot 1 \cdot 2607t + v5 \cdot 3 \cdot 281t + v0 \cdot 5 \cdot 3041t + v50039 \cdot 1 \cdot 0410t + v200069 \cdot 600201 \cdot 18121 \cdot v \cdot 50201 \cdot 0 \cdot 1 \cdot 8505E + v0 \cdot 3 \cdot 9770E + v2 \cdot 9 \cdot 0560E - v1 \cdot 1$$

$$\cdot 4491t + v5 \cdot c \cdot /342t + v50039 \cdot 1 \cdot 1541t + v2 \cdot 7 \cdot 2121t + v0 \cdot 4 \cdot 6284E - v5 \cdot 2 \cdot 9086E + v200089 \cdot 800201 \cdot 18289 \cdot v \cdot 50449 \cdot 0 \cdot 1 \cdot 687E + v0 \cdot 5 \cdot 8060E + v2 \cdot 4 \cdot 4666E - v1 \cdot 1 \cdot 431$$

$$5E + 02 \cdot 2 \cdot 09 \cdot 2E + v200089 \cdot 800201 \cdot 174948t + v5 \cdot 2 \cdot 7179E + v50039 \cdot 1 \cdot 1095E + v2 \cdot 5 \cdot 8222E - v5 \cdot 2 \cdot 9045E + v200089 \cdot 800201 \cdot 17365 \cdot v \cdot 44925t + v0 \cdot 1 \cdot 05808E + v0 \cdot 4 \cdot 4568E + v200089 \cdot 800201 \cdot 1683$$

$$5 \cdot 2 \cdot 9405E + v50039 \cdot 1 \cdot 3225E + v0 \cdot 5 \cdot 0942E + v50039 \cdot 1 \cdot 1130t + v2 \cdot 6 \cdot 4255E - v5 \cdot 2 \cdot 8091E + v200089 \cdot 800201 \cdot 17785 \cdot v \cdot 45625 \cdot 0 \cdot 1 \cdot 6223E + v0 \cdot 4 \cdot 914E + v2 \cdot -8 \cdot 636$$

$$\cdot 6592E + v50039 \cdot 1 \cdot 3288E + v50039 \cdot 1 \cdot 11014t + v2 \cdot 6 \cdot 7500E - v5 \cdot 2 \cdot 9925E + v200089 \cdot 800201 \cdot 15313 \cdot v \cdot 53352t + v0 \cdot 5 \cdot 3352t + v0 \cdot 1 \cdot 4234E + v5 \cdot 2 \cdot 657$$

$$\cdot 8E + 050039 \cdot 1 \cdot 1174E + v0 \cdot 4 \cdot 6283E + v0 \cdot 2 \cdot 8035E + v0 \cdot 3 \cdot 1011E + v2 \cdot 6 \cdot 5160E + v0 \cdot 1 \cdot 7248E + v0 \cdot 4 \cdot 2870E + v0 \cdot 2 \cdot 1 \cdot 9801E - v0 \cdot 2 \cdot 6567E + v0$$

$$\cdot 0039 \cdot 1 \cdot 3265E + v0 \cdot 3 \cdot 31518E + v0 \cdot 2 \cdot 2212E + v0 \cdot 4 \cdot 6284E - v5 \cdot 2 \cdot 9086E + v200089 \cdot 800201 \cdot 19420E + v0 \cdot 5 \cdot 18488 \cdot v \cdot 501848 \cdot 0 \cdot 1 \cdot 6798E + v0 \cdot 4 \cdot 40255E + v2 \cdot -1 \cdot 5405E - v1 \cdot 1 \cdot 4694E + v5 \cdot 2 \cdot 0173E + v0 \cdot 5 \cdot 05003$$

$$9 \cdot 1 \cdot 4572E + v0 \cdot 6 \cdot 2260E + v50039 \cdot 1 \cdot 4065E + v2 \cdot 4 \cdot 4065E + v200089 \cdot 800201 \cdot 18457 \cdot v \cdot 50757 \cdot 0 \cdot 1 \cdot 6459E + v0 \cdot 4 \cdot 45545E + v200089 \cdot 800201 \cdot 1683$$

$$\cdot 5572E + v0 \cdot 5 \cdot 3722E - v5 \cdot 3 \cdot 3225E + v0 \cdot 2 \cdot 7 \cdot 007E - v3 \cdot 5 \cdot 0942E + v50039 \cdot 1 \cdot 0122E + v0 \cdot 5 \cdot 1025E + v0 \cdot 4 \cdot 0351E + v2 \cdot 6 \cdot 5526E + v0 \cdot 1 \cdot 4584E + v5 \cdot 2 \cdot 052$$

$$\cdot E + 02 \cdot 5 \cdot 2094E - v5 \cdot 3 \cdot 0569E + v0 \cdot 200089 \cdot 800201 \cdot 19632 \cdot v \cdot 51313 \cdot v \cdot 2 \cdot 0457E + v0 \cdot 4 \cdot 2916E + v2 \cdot 5 \cdot 3352E + v0 \cdot 1 \cdot 4234E + v5 \cdot 2 \cdot 657$$

$$\cdot 6 \cdot 6794E - v5 \cdot 3 \cdot 1944E + v0 \cdot 200089 \cdot 800201 \cdot 19600 \cdot v \cdot 53000 \cdot v \cdot 2 \cdot 1209E + v0 \cdot 4 \cdot 4975E + v2 \cdot 1 \cdot 2590E + v0 \cdot 1 \cdot 5875E + v5 \cdot 2 \cdot 5562E + v50039 \cdot 1 \cdot 2971E + v0 \cdot 2 \cdot 052$$

$$\cdot 9329E - v5 \cdot 3 \cdot 0 \cdot 65E + v0 \cdot 200089 \cdot 800201 \cdot 19968E + v5 \cdot 2 \cdot 2550E + v0 \cdot 4 \cdot 3208E + v0 \cdot 2 \cdot 4 \cdot 3308E + v0 \cdot 4 \cdot 9191E + v2 \cdot -7 \cdot 5790E - v1 \cdot 1 \cdot 3235E + v5 \cdot 2 \cdot 0173E + v0 \cdot 2 \cdot 1015E + v2 \cdot 6 \cdot 7537E + v0 \cdot 1 \cdot 4246E + v5 \cdot 0 \cdot 050039 \cdot 1 \cdot 0449E + v0 \cdot 5 \cdot 5056E - v3$$

$$\cdot E - 03 \cdot 2 \cdot 9921E + v0 \cdot 200089 \cdot 800201 \cdot 20136 \cdot v \cdot 52156 \cdot v \cdot 2 \cdot 6164E + v0 \cdot 5 \cdot 5092E + v0 \cdot 1 \cdot 45148E + v2 \cdot 4 \cdot 5148E + v0 \cdot 2 \cdot 4 \cdot 9092E + v0 \cdot 1 \cdot 45609E + v200089 \cdot 800201 \cdot 1683$$

$$\cdot 5572E + v0 \cdot 5 \cdot 3722E - v5 \cdot 3 \cdot 3225E + v0 \cdot 2 \cdot 7 \cdot 007E - v3 \cdot 5 \cdot 0942E + v50039 \cdot 1 \cdot 0122E + v0 \cdot 5 \cdot 1025E + v0 \cdot 4 \cdot 0351E + v2 \cdot 6 \cdot 5526E + v0 \cdot 1 \cdot 4584E + v5 \cdot 2 \cdot 052$$

$$\cdot 9075E + v0 \cdot 200089 \cdot 800201 \cdot 20472 \cdot v \cdot 54112 \cdot v \cdot 2 \cdot 5421t + v0 \cdot 4 \cdot 3775E + v2 \cdot 5 \cdot 3312E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot E + 02 \cdot 80089 \cdot 800201 \cdot 20514E + v0 \cdot 54400 \cdot v \cdot 2 \cdot 0640E + v50039 \cdot 1 \cdot 012516E + v0 \cdot 5 \cdot 3265E + v0 \cdot 1 \cdot 3496E + v5 \cdot 2 \cdot 3225E + v0 \cdot 5 \cdot 9535E - v3 \cdot 0 \cdot 594E + v2 \cdot 02816E + v0 \cdot 2 \cdot 8089 \cdot 800201 \cdot 214$$

$$\cdot 089 \cdot 800201 \cdot 20005 \cdot v \cdot 54648 \cdot v \cdot 2 \cdot 4 \cdot 3929E + v0 \cdot 2 \cdot 1209E + v0 \cdot 4 \cdot 4290E + v0 \cdot 2 \cdot 9 \cdot 069E + v0 \cdot 1 \cdot 3496E + v5 \cdot 2 \cdot 1979E + v0 \cdot 505059 \cdot 1 \cdot 2331E + v0 \cdot 2 \cdot 6 \cdot 8423E - v3 \cdot 0 \cdot 0115E + v0 \cdot 2 \cdot 21699 \cdot v \cdot 0$$

$$\cdot 800201 \cdot 20478 \cdot v \cdot 54936 \cdot v \cdot 2 \cdot 3890E + v0 \cdot 4 \cdot 4939E + v0 \cdot 1 \cdot 3493E + v5 \cdot 2 \cdot 15902E - v1 \cdot 1 \cdot 5515E + v5 \cdot 2 \cdot 1166E + v0 \cdot 5059 \cdot 1 \cdot 3734E + v0 \cdot 6 \cdot 7404E + v2 \cdot 4 \cdot 9124E + v5 \cdot 0 \cdot 5964E - v3$$

$$\cdot 3 \cdot 16994E + v0 \cdot 200089 \cdot 800201 \cdot 20504 \cdot v \cdot 55824 \cdot v \cdot 2 \cdot 4577E + v0 \cdot 4 \cdot 5747E + v2 \cdot 5 \cdot 5244E + v0 \cdot 1 \cdot 4071E + v5 \cdot 2 \cdot 3944E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 1291E + v0 \cdot 2 \cdot 7 \cdot 2500E - v5 \cdot 1 \cdot 2918$$

$$\cdot 9075E + v0 \cdot 200089 \cdot 800201 \cdot 20472 \cdot v \cdot 54112 \cdot v \cdot 2 \cdot 5421t + v0 \cdot 4 \cdot 3775E + v2 \cdot 5 \cdot 3312E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot E + 02 \cdot 80089 \cdot 800201 \cdot 20514E + v0 \cdot 54400 \cdot v \cdot 2 \cdot 0640E + v50039 \cdot 1 \cdot 012516E + v0 \cdot 5 \cdot 3265E + v0 \cdot 1 \cdot 3496E + v5 \cdot 2 \cdot 3225E + v0 \cdot 5 \cdot 9535E - v3 \cdot 0 \cdot 594E + v2 \cdot 02816E + v0 \cdot 2 \cdot 8089 \cdot 800201 \cdot 214$$

$$\cdot 089 \cdot 800201 \cdot 20005 \cdot v \cdot 54648 \cdot v \cdot 2 \cdot 4 \cdot 3929E + v0 \cdot 2 \cdot 1209E + v0 \cdot 4 \cdot 4290E + v0 \cdot 2 \cdot 9 \cdot 069E + v0 \cdot 1 \cdot 3496E + v5 \cdot 2 \cdot 1979E + v0 \cdot 505059 \cdot 1 \cdot 2331E + v0 \cdot 2 \cdot 6 \cdot 8423E - v3 \cdot 0 \cdot 0115E + v0 \cdot 2 \cdot 21699 \cdot v \cdot 0$$

$$\cdot 800201 \cdot 20478 \cdot v \cdot 54936 \cdot v \cdot 2 \cdot 3890E + v0 \cdot 4 \cdot 4939E + v0 \cdot 1 \cdot 3493E + v5 \cdot 2 \cdot 15902E - v1 \cdot 1 \cdot 5515E + v5 \cdot 2 \cdot 1166E + v0 \cdot 5059 \cdot 1 \cdot 3734E + v0 \cdot 6 \cdot 7404E + v2 \cdot 4 \cdot 9124E + v5 \cdot 0 \cdot 5964E - v3$$

$$\cdot 21311 \cdot v \cdot 55511 \cdot v \cdot 2 \cdot 5802E + v0 \cdot 4 \cdot 4505E + v0 \cdot 2 \cdot 35551t + v0 \cdot 4 \cdot 1516E + v0 \cdot 5 \cdot 3265E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot 79 \cdot 0 \cdot 55759 \cdot v \cdot 2 \cdot 5529E + v0 \cdot 4 \cdot 5797E + v0 \cdot 2 \cdot 1209E + v0 \cdot 4 \cdot 4290E + v0 \cdot 2 \cdot 9 \cdot 069E + v0 \cdot 1 \cdot 3496E + v5 \cdot 2 \cdot 1979E + v0 \cdot 505059 \cdot 1 \cdot 2331E + v0 \cdot 2 \cdot 6 \cdot 8423E - v3 \cdot 0 \cdot 0115E + v0 \cdot 2 \cdot 21699 \cdot v \cdot 0$$

$$\cdot 60459 \cdot 0 \cdot 2 \cdot 5529E + v0 \cdot 4 \cdot 1097E + v2 \cdot 1 \cdot 5864E + v0 \cdot 1 \cdot 3440E + v5 \cdot 2 \cdot 1614E + v0 \cdot 6 \cdot 7131E - v3 \cdot 0 \cdot 2 \cdot 7644E + v0 \cdot 200089 \cdot 800201 \cdot 22991 \cdot v \cdot 0$$

$$\cdot 747 \cdot 0 \cdot 2 \cdot 4823E + v0 \cdot 4 \cdot 3441E + v2 \cdot 2 \cdot 5166E + v0 \cdot 1 \cdot 4332E + v5 \cdot 2 \cdot 3277E + v0 \cdot 1 \cdot 55149E - v3 \cdot 0 \cdot 3277E + v0 \cdot 2 \cdot 7644E + v0 \cdot 4 \cdot 7424E - v5 \cdot 0 \cdot 0040E + 0 \cdot 2 \cdot 2357E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot 201 \cdot 21144 \cdot 0 \cdot 55524 \cdot v \cdot 50039 \cdot 1 \cdot 20504 \cdot v \cdot 55824 \cdot v \cdot 2 \cdot 3620E + v0 \cdot 1 \cdot 5125E + v5 \cdot 2 \cdot 1508E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2626E + v0 \cdot 6 \cdot 9127E - v5 \cdot 0 \cdot 0303$$

$$\cdot 21311 \cdot v \cdot 55511 \cdot v \cdot 2 \cdot 5802E + v0 \cdot 4 \cdot 4505E + v0 \cdot 2 \cdot 35551t + v0 \cdot 4 \cdot 1516E + v0 \cdot 5 \cdot 3265E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot 79 \cdot 0 \cdot 55759 \cdot v \cdot 2 \cdot 5529E + v0 \cdot 4 \cdot 5797E + v0 \cdot 2 \cdot 1209E + v0 \cdot 4 \cdot 4290E + v0 \cdot 2 \cdot 9 \cdot 069E + v0 \cdot 1 \cdot 3496E + v5 \cdot 2 \cdot 1979E + v0 \cdot 505059 \cdot 1 \cdot 2331E + v0 \cdot 2 \cdot 6 \cdot 8423E - v3 \cdot 0 \cdot 0115E + v0 \cdot 2 \cdot 21699 \cdot v \cdot 0$$

$$\cdot 0 \cdot 4 \cdot 6984E + v2 \cdot 7 \cdot 1 \cdot 197E + v0 \cdot 1 \cdot 35571t + v0 \cdot 4 \cdot 0949E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 1614E + v0 \cdot 6 \cdot 7074E + v0 \cdot 2 \cdot 2357E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot 69994E + v0 \cdot 2 \cdot 5 \cdot 3491C + v0 \cdot 1 \cdot 45491C + v0 \cdot 1 \cdot 5 \cdot 3448E + v0 \cdot 2 \cdot 5 \cdot 3448E + v0 \cdot 1 \cdot 6 \cdot 7074E + v0 \cdot 2 \cdot 2357E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot 8E + 02 \cdot 4 \cdot 0909L + v0 \cdot 1 \cdot 43315E + v0 \cdot 2 \cdot 5828E + v0 \cdot 1 \cdot 53377E + v0 \cdot 4 \cdot 1416E + v0 \cdot 2 \cdot 7074E + v0 \cdot 2 \cdot 2357E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot 2 \cdot 4 \cdot 50039 \cdot 1 \cdot 4103E + v0 \cdot 1 \cdot 42105E + v0 \cdot 2 \cdot 52268E + v0 \cdot 1 \cdot 51347E + v0 \cdot 4 \cdot 1405E + v0 \cdot 2 \cdot 7074E + v0 \cdot 2 \cdot 2357E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot 7976H + v0 \cdot 1 \cdot 4 \cdot 5440E + v0 \cdot 2 \cdot 52268E + v0 \cdot 1 \cdot 51347E + v0 \cdot 4 \cdot 1405E + v0 \cdot 2 \cdot 7074E + v0 \cdot 2 \cdot 2357E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot 6E + 00 \cdot 1 \cdot 4 \cdot 5440E + v0 \cdot 2 \cdot 52268E + v0 \cdot 1 \cdot 51347E + v0 \cdot 4 \cdot 1405E + v0 \cdot 2 \cdot 7074E + v0 \cdot 2 \cdot 2357E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot 0 \cdot 4 \cdot 6 \cdot 6984E + v2 \cdot 7 \cdot 1 \cdot 197E + v0 \cdot 1 \cdot 35571t + v0 \cdot 4 \cdot 0949E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 1614E + v0 \cdot 6 \cdot 7074E + v0 \cdot 2 \cdot 2357E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot 747 \cdot 0 \cdot 2 \cdot 4823E + v0 \cdot 4 \cdot 3441E + v2 \cdot 2 \cdot 5166E + v0 \cdot 1 \cdot 4332E + v5 \cdot 2 \cdot 3277E + v0 \cdot 1 \cdot 55149E - v3 \cdot 0 \cdot 3277E + v0 \cdot 2 \cdot 7644E + v0 \cdot 4 \cdot 7424E - v5 \cdot 0 \cdot 0040E + 0 \cdot 2 \cdot 2357E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot 201 \cdot 21144 \cdot 0 \cdot 55524 \cdot v \cdot 50039 \cdot 1 \cdot 20504 \cdot v \cdot 55824 \cdot v \cdot 2 \cdot 3620E + v0 \cdot 1 \cdot 5125E + v5 \cdot 2 \cdot 1508E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2626E + v0 \cdot 6 \cdot 9127E - v5 \cdot 0 \cdot 0303$$

$$\cdot 21311 \cdot v \cdot 55511 \cdot v \cdot 2 \cdot 5802E + v0 \cdot 4 \cdot 4505E + v0 \cdot 2 \cdot 35551t + v0 \cdot 4 \cdot 1516E + v0 \cdot 5 \cdot 3265E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot 79 \cdot 0 \cdot 55759 \cdot v \cdot 2 \cdot 5529E + v0 \cdot 4 \cdot 5797E + v0 \cdot 2 \cdot 1209E + v0 \cdot 4 \cdot 4290E + v0 \cdot 2 \cdot 9 \cdot 069E + v0 \cdot 1 \cdot 3496E + v5 \cdot 2 \cdot 1979E + v0 \cdot 505059 \cdot 1 \cdot 2331E + v0 \cdot 2 \cdot 6 \cdot 8423E - v3 \cdot 0 \cdot 0115E + v0 \cdot 2 \cdot 21699 \cdot v \cdot 0$$

$$\cdot 0 \cdot 4 \cdot 6 \cdot 6984E + v2 \cdot 7 \cdot 1 \cdot 197E + v0 \cdot 1 \cdot 35571t + v0 \cdot 4 \cdot 0949E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 1614E + v0 \cdot 6 \cdot 7074E + v0 \cdot 2 \cdot 2357E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot 8E + 02 \cdot 4 \cdot 0909L + v0 \cdot 1 \cdot 43315E + v0 \cdot 2 \cdot 5828E + v0 \cdot 1 \cdot 53377E + v0 \cdot 4 \cdot 1416E + v0 \cdot 2 \cdot 7074E + v0 \cdot 2 \cdot 2357E + v0 \cdot 1 \cdot 3459E + v5 \cdot 2 \cdot 2497E + v0 \cdot 5 \cdot 05039 \cdot 1 \cdot 2358E + v0 \cdot 3 \cdot 0083$$

$$\cdot 2 \cdot 4 \cdot 50039 \cdot 1 \cdot 4103E + v0 \cdot 1 \cdot 42105E + v0 \cdot$$

JARIN-1

D-79854

FIR 1 MAD 2 KELO, <MINKE> SIZE=0U>
FIR 2 MAD 2 KELO, <MINKE> SIZE=CU40>
FIR 3 MAD 4 KELO, <MINKE> SIZE=DU>
) FIR 4 MAD 4 KELO, <MINKE> SIZE=DU>
FIR 5 MAD 200 KELO, <MINKE> SIZE=DU>
FIR 6 MAD 4 KELO, <MINKE> SIZE=CU40>
FIR 7 MAD 4 KELO, <MINKE> SIZE=DU>
FIR 8 MAD 4 KELO, <MINKE> SIZE=CU40>
FIR 9 MAD 4 KELO, <MINKE> SIZE=DU>
FIR 10 MAD 4 KELO, <MINKE> SIZE=CU40>
FIR 11 MAD 4 KELO, <MINKE> SIZE=DU>
FIR 12 MAD 4 KELO, <MINKE> SIZE=CU40>
FIR 13 MAD 4 KELO, <MINKE> SIZE=DU>
FIR 14 MAD 4 KELO, <MINKE> SIZE=CU40>
FIR 15 MAD 4 KELO, <MINKE> SIZE=DU>

END (IP FORMATTED DIRECTORY OPERATION...)

INITIAL UP YUZO RECURUS 4 NO FILE(S).
SMALLER RECURUS LENGTH IS DU BYTES.
LARGE(S) RECURUS LENGTH IS CU40 BYTES.

\$ NOP
\$ NOCP

SEX E

***** JAROUT1 *****

INPUT PARAMETERS ARE: AS FL=1 1 1 5

TAPE NO.	FILE NO.	LENGTH
1	5	2548
RECORD		
0889 851011	8216.3	21656.0
7E+00 4.0621E-03	8.2621E+00	5.6171E+02
313E+05 1.1628E+05	0.0148E+00	0.0089 850101
5.8003E+02 -5.4690E+00	9.2249E+00	4.8255E-03
8720.1 2252E+06	1.0597E+05	1.2094E+05
2E+03 3.4288E+02	8.3022E+00	5.4998E+02
636E+05 0.0319	1.7799E+02	5.1523E-03
-4.0998E+00 1.0141E+05	1.1352E+05	0.0039 1.6257E+02
343.E 8.1958E+00	5.4995E+02	-3.2251E+00
6E+02 0.02089	9855.5	2.7678E+00
9.1693E+01 2.6934E-03	1.0063.5	3.0398E+02
1.0001E+05 1.0802E+05	1.0039 1.	3.1264E-03
1E+01 5.5415E+02	1.0073E+05	1.0072E+05
0161 1039.9	25319.0	1.00567E+03
3.06519E-02	1.002089	850101
1.0551E+05 0.0339	1.2713E+02	2.8552E+02
8E+02 2.3892E+00	1.0075E+02	2.8552E+02
1.30143.0 0.1.2496E+01	5.7817E+02	3.7366E+00
2.55592E+02 0.0089	850101	11071.0
3.535 E.5508E+01	1.00341E-03	2.8795E+02
7E+00 9.9258E+04	1.0369E+05	0.0039 5.3626E+01
		1.0071E-03

TAPE NO. 1 FILE NO. 5 LENGTH 2048

RECORD	FILE NO.	LENGTH
1E5 86143.0	5521E+06	162655.0
-5+12 6.2979E-03	2.8359E+02	86143.0
012E+05 1.3292E+05	0.039 1.4133E+02	6.0159E+02
3.2861E+02 -7.5016E+00	1.2937E+05	1.3126E+05
60559.0 164918.0	1.2731E+01	3.3314E+02
2E+03 2.801CE+02	0.0389 864930	611902.4
577E+05 7.7648E+01	5.5405E-03	2.5951E+02
-8.7048E+01 1.2844E+05	1.3143E+05	0.0039 7.5386E+01
517.0 1.1348E+01	3.3863E+02	7.6100E+00
7E+02 0.02089	861436	66268.4
1.3804E+02 4.9277E-03	3.2671E+02	1.2739E+01
		2.8903E+02
		2.8311E+00
		1.1952E+05
		1.3293E+05
		0.0039 1.0215E+02
		6.4971E+02
		1.2647E+05
		1.3179E+05
		0.039 1.612
		1.0037E+00
		1.2085E+01
		5.660
		1.0903.
		1.03421E-03
		1.3494E+01
		1.0474E+05
		1.3319E+01
		5.3341E+02
		-6.087

FILE - 5
ID: F8-079A-010.

ISCE - 3

FILE - 5
ID: F8-079A-010.
FILE : 6.

FILE : 6.
NOTE: DUMP FILE ② ⑤

First and last records
for line span)

TAPE TIME SPAN:
12/22/83 - 4/30/84

*** JOB DONE.
\$ WEO LPS

ISEE - 3

SW PROTONS BULK FLOW LATITUDE, S-M

78-079A-01P

This data set consists of one magnetic tape. The tape is 6250, 9-track, ASCII, multi-filed (VAX copy format). The tape was created on a VAX computer. The D and C number, number of files and time span are as follows:

D#	C#	FILES	TIME SPAN
D-82888	C-28062	9	08/13/78 - 02/17/80

NSSDC data set 78-079A-01P

ISEE-3, "SW Protons Bulk Flow Latitude,5-M"

Data Description

These data have been supplied by Dr. J. T. Gosling, Los Alamos National Laboratory, (505)-667-5389, ESSDP1::073500, with the assistance of Sandy Kedge (ESSDP1::088447), and consist of values of solar wind plasma bulk flow velocity latitude angle derived from proton measurements obtained by the Los Alamos ion experiment on the ISEE-3/ICE spacecraft. The ion instrument on ISEE-3 failed on February 26, 1980, so no proton data are available from this instrument after that date. This data set covers the time span from August 13, 1978 (soon after launch) to February 17, 1980.

TAPE FORMAT

ASCII data files were copied electronically to NSSDC and transferred to 9-track magnetic tape using the VAX/VMS COPY command, thus creating a standard labeled tape. The tape label is 'IC3LAT', the density is 6250 bpi, and the block size is 2048 bytes. There are 3 data files on the tape. The file names are POLAR1.DAT, POLAR2.DAT and POLAR3.DAT.

TIME RESOLUTION AND PARAMETERS

The temporal resolution of these data is 5 minutes. Each data record consists of:

- 1) the date (YYMMDD),
- 2) the time in seconds from start of day (SSSSS.S),
- 3) the UT time of day in HHMM.0,
- 4) the bulk flow latitude angle based on proton measurements, in degrees, measured relative to the spacecraft equatorial plane, which was approximately the same as the ecliptic plane. The spacecraft spin axis was maintained within 0.5 degree of perpendicular to the ecliptic. Fill value is -999.9.

DATA FORMAT:

WRITE(2,2000) IYYMMDD, SEC, UT, ANGLE
2000 FORMAT (1X,I6,1X,2(F8.1,1X),1PE11.4,1X)

DATA SAMPLE:

78-079A-01P

780813 0.0 0.0 -9.9990E+02
780813 300.0 5.0 -9.9990E+02
780813 600.0 10.0 -9.9990E+02
780813 900.0 15.0 -9.9990E+02
780813 1200.0 20.0 -9.9990E+02
.

790807 84300.0 2325.0 3.6000E+00
790807 84600.0 2330.0 2.8000E+00
790807 84900.0 2335.0 2.8000E+00
790807 85200.0 2340.0 -9.9990E+02
790807 85500.0 2345.0 1.8000E+00
790807 85800.0 2350.0 2.1000E+00
790807 86100.0 2355.0 2.1000E+00
.

.

BULK FLOW SPEED AND AZIMUTH DATA

Solar wind plasma bulk flow speed and azimuth data from the same experiment are available for this period as NSSDC data set number 78-079A-01N.

EPHEMERIS DATA

This data set does not contain any spacecraft position information. Daily values of ISEE-3/ICE position in GSE coordinates are included in the magnetic field data from JPL and are available as NSSDC data set 78-079A-02D.

INSTRUMENT DESCRIPTION

For a description of the Los Alamos instrument on the ISEE-3/ICE spacecraft, see: Bame, S.J., J.R. Asbridge, H.E. Felthauser, J.P. Glare, H.L. Hawk, and J. Chavez, ISEE-C solar wind plasma experiment, IEEE Trans. Geosci. Electron., GE-16, 160-162, 1978.

See also Russell and Petrinec
GRL, 19, No. 10, 961-963, May 22, 1992

NSSDC DATA SET 78-079A-01P

Tape labels, file names, and file sizes

SPACECRAFT: ISEE-3/ICE

DATA SET NAME: SW PROTONS BULK FLOW LATITUDE,5-M

SOURCE: DR. J. T. GOSLING
MS-D438, LOS ALAMOS NATIONAL LABORATORY
LOS ALAMOS, NM 87545
Phone: 505-667-5389
e-mail (SPAN): ESSDP1::073500

TIME SPAN: 13Aug78-17Feb80

QUANTITY: 1 tape

TAPE MEDIUM AND DENSITY: 9-track, 6250 BPI

TAPE FORMAT: ASCII, VAX (ANSI) STANDARD LABELLED TAPE

TAPE BLOCK SIZE: 2048 Bytes

DATA FORMAT: See data description

Tape Label	Data File Name	Data File Size
-----	-----	-----
IC3LAT	POLAR1.DAT	1059 / 4051 / 2 / 51843
	POLAR2.DAT	1039 / 3974 / 2 / 50866
	POLAR3.DAT	1135 / 4344 / 2 / 55594
-----	-----	-----

Notes:

1. Since this is a standard labelled tape, each data file has a header file and a trailer file associated with it.
2. On a VAX, to copy (e.g.) file POLAR1.DAT from tape to a disk file with the same name, do:

```
$ ALLOCATE <dev_name>
$ MOUNT <dev_name>: IC3LAT
$ COPY <dev_name>:POLAR1.DAT *.*
```

This will require 4,051 VAX blocks on disk, and will create an ASCII file consisting of 51,843 lines of data.

To copy all the files from tape to disk, do:

```
$ ALLOCATE <dev_name>:
```

\$ MOUNT <dev_name>: IC3LAT
\$ COPY <dev_name>:.* .*

78-079A-01P

This will require 12,369 VAX blocks.

Data File	Time Span		
	YY/MM/DD hh:mm	to	YY/MM/DD hh:mm
POLAR1.DAT	78/08/13 00:00	to	79/02/08 23:55
POLAR2.DAT	79/02/09 00:00	to	79/08/07 23:55
POLAR3.DAT	79/08/08 00:00	to	80/02/17 01:20

ISEE - 3

15-M & 2-HR COSMIC RAY FLUXES

78-079A-04C

This data set consists of one magnetic tape. The tape is 6250, 9-track, ASCII, mult-filed (VAX copy format). The tape was created on a VAX computer. The D and C number, number of files and time span are as follows:

D#	C#	FILES	TIME SPAN
D-82884	C-28061	9	08/15/78 - 02/07/87

I. Introduction

Refer to the "The Medium Energy Cosmic Ray Experiment for Isee-C" paper written by T.T. von Rosenvinge, F.B. McDonald, J.H. Trainor, M.A.I. Van Hillebeke and L.A. Fisk. Reference can be found in the IEEE Transactions on Geoscience Electronics, Vol. GE-16, No. 3, July 1978, 0018-9413/78/0700-2085.

II. Data Files

The files consist of an ASCII header that describes the format of data fields followed by the data itself that may be in either ASCII or binary form.

For simplicity, it is convenient to think of a data file as a table of numbers. Each row in the table corresponds to a particular event or time interval, each column gives the values of a particular parameter (e.g. 10 MeV proton flux, D1 pulse height, time, type II radio intensity) in each event.

Data files begin with an ASCII header that describes each of the data fields (columns) in the file. Each ASCII line is terminated by a CR LF. In the ASCII header, lines beginning with a ';' are comments. The actual data follows the header and is binary as specified on the first line of the header.

In binary files integers in the data are stored with least-significant byte (LSB) first. Real numbers are

in IEEE 754 standard form. These are the standard IBM-PC & 8087 coprocessor conventions.

The following format types are used in Flux verses.

The sizes of the data fields refer to binary data only.

T2	Begin and end time (long, 32 bit, integer) Seconds since 1/1/70.
I	Single Integer (16 bit).
L	Long Integer (32 bit).
R2	Ratio- Float count and live time (2*32 bit).

Time in binary form is encoded as a 32-bit integer representing the number of seconds since 1970 Jan 1 0000:00 (valid from 1902 through 2038).

The columns are grouped into records called verses in order to group data of a similar kind. For a given time period or event, not all verses need be present, thus, only the verses containing active data take up room in the data file. The group of verses that make up an event or time period is called a chapter.

The type of verse defined is Flux. Flux verses are rather specific to particle data. The number and mixture of fields in a verse is arbitrary (within limits given below) but the fields in the data must correspond one-for-one with the descriptors in the header. The verse number, appears again at the beginning of each verse of data. The line describing

each field in the verse contains the format, the initial axis limits and the title.

Flux verses are an efficient form for storing large numbers of particle fluxes derived from a single pulse-height matrix. The normalizing rates and counts are stored at the beginning of the verse and the count of a given species and energy (box count) is stored as an integer. This allows each flux to be stored in a 16-bit integer instead of a 64-bit real value and error. The energy limits and geometry factor needed to normalize each flux are listed as fields in the line of the header describing that value.

Particles of a given type and in a specified energy interval, accumulated over a specified time period, will reside in a specific region of the pulse-height matrix; this matrix may have more than 2 dimensions. The flux (or more precisely, differential intensity) corresponding to these events is given by the following formula:

$\text{FLUXreg} = \text{Nreg} \times \text{RATEmatx} / (\text{Nmatx} \times (\text{Emax}-\text{Emin}) \times \text{GF})$
where:

FLUXreg = number of pulse height events in the region.

RATEmatx = rate of all events which occurred and would have appeared on the matrix were it not for limitations on the bit-rate and

the non-zero conversion time of the pulse-height analyzers.

Nmatx = number of events which did appear on the matrix.

E_{max} - E_{min} = the interval in kinetic energy (MeV/nucleon) for the given region.

This equation implies that the live-time or effective accumulation time for pulse-height events is

$$\text{live time} = \text{Nmatx} / \text{RATEmatx}$$

III. Flux ASCII Header

The Flux ASCII header appears on each file. The header information contains the following information. The ASCII header is followed by the actual binary data.

```
BINARY CREATED 1990 AUG 14 11:20:59 ;
ISSE-3      0 DAY   8 HR   0 MIN   0 SEC SUM. DATA FILE ;
;
90/04/07  0: 0: 0 ; START TIME OF FILE
90/04/21  0: 0: 0 ; END TIME OF FILE
  0     8: 0: 0 ; AVG. INTERVAL
;
; TIME OF FIRST CHAPTER IN FILE 90/ 4/ 7  8: 0: 0
;
# 0 RATE
    T2           TIME ;
# 1 FLUX      7-HET I BSTP, HIGH GAIN
    R2  1.0E-05  1.0E+05   HET I BSTP, HI RATE
    L   0        32767   COUNT ON HET I BTSP, HI MATRIX
;TYPE E MIN   E MAX   GEOM PART MODE EVENT TYPE
    I   22.14    27.17   1.705 PROTON ICIB2 ; 7
    I   30.24    45.20   1.592 PROTON ICIB3 ; 7
    I   45.20    57.39   1.279 PROTON ICIB3 ; 7
;
# 2 FLUX      9-HET I BST, LOW GAIN
    R2  1.0E-05  1.0E+05   HET I BSTP, LO RATE
    L   0        32767   COUNT ON HET I BSTP, LO MATRIX
;TYPE E MIN   E MAX   GEOM PART MODE EVENT TYPE
    I   30.01    45.09   1.598 HE4   ICIL3 ; 9
    I   45.09    57.15   1.289 HE4   ICIL3 ; 9
```

78-079A-04C

;

3 FLUX 10-HET I PEN, HIGH GAIN
R2 1.0E-05 1.0E+05 HET I PEN, HI RATE
L 0 32767 COUNT ON HET I PEN, HI MATRIX
;TYPE E MIN E MAX GEOM PART MODE EVENT TYPE
I 132.30 241.23 1.688 PROTON ICIPH ; 10
;

4 FLUX 12-HET II AST, HIGH GAIN
R2 1.0E-05 1.0E+05 HET II AST, HI RATE
L 0 32767 COUNT ON HET II AST, HI MATRIX
;TYPE E MIN E MAX GEOM PART MODE EVENT TYPE
I 0.22 2.00 1.280 Elec ICIIIA2 ; 12
I 4.45 6.41 1.107 Proton ICIIIA2 ; 12
I 7.08 12.83 1.283 Proton ICIIIA3 ; 12
I 12.83 22.66 1.278 Proton ICIIIA3 ; 12
I 4.40 6.42 1.143 He4 ICIIIA2 ; 12
I 7.08 12.64 1.217 He4 ICIIIA3 ; 12
I 12.64 22.08 1.252 He4 ICIIIA3 ; 12
;

5 FLUX 21-VLET II, EVENT TYPE 0
R2 1.0E-05 1.0E+05 VLET II ET 0 RATE
L 0 32767 COUNT ON VLET II ET 0 MATRIX
;TYPE E MIN E MAX GEOM PART MODE EVENT TYPE
I 2.09 2.81 0.265 C12 ICIIID2 ; 21
I 3.93 5.64 0.287 C12 ICIIID3 ; 21
I 2.08 2.80 0.287 O16 ICIIID2 ; 21
I 3.94 5.60 0.287 O16 ICIIID3 ; 21
I 2.08 2.81 0.287 Fe56 ICIIID2 ; 21
I 4.11 5.62 0.287 Fe56 ICIIID3 ; 21
;

6 FLUX 22-VLET II, EVENT TYPE 1
R2 1.0E-05 1.0E+05 VLET II ET 1 RATE
L 0 32767 COUNT ON VLET II ET 1 MATRIX
;TYPE E MIN E MAX GEOM PART MODE EVENT TYPE
I 1.35 1.65 0.187 HE3 ICIIID2 ; 22
I 2.10 2.89 0.192 HE3 ICIIID3 ; 22
I 2.89 3.98 0.213 HE3 ICIIID3 ; 22
I 1.10 1.34 0.252 HE4 ICIIID2 ; 22
I 1.34 2.82 0.219 HE4 ICIIID2 ; 22
I 2.10 3.94 0.234 HE4 ICIIID3 ; 22
I 3.94 5.92 0.231 HE4 ICIIID3 ; 22
;

7 RATE
R2 1.0E-05 1.0E+05 ICIIIA1H-(U)
R2 1.0E-05 1.0E+05 ICIIIAS-(U)
R2 1.0E-05 1.0E+05 ICIBSE-(U)
R2 1.0E-05 1.0E+05 ICIILDI-(U)
R2 1.0E-05 1.0E+05 ICIIL
R2 1.0E-05 1.0E+05 ICIILZ2
R2 1.0E-05 1.0E+05 ICIILZ3
;

#END

The binary integers automatically converted to the most significant byte first.

2.2.2.2 DECIMAL

Decimal integers are converted to binary integers by mapping each digit into each byte, except the sign bit. Negative numbers are mapped to positive numbers on the most significant byte. All digits must be mapped.

The decimal integers are mapped to binary integers by mapping each digit to a byte. Negative numbers are mapped to positive numbers on the most significant byte. All digits must be mapped.

2.2.2.3 REAL NUMBER

The 80387 represents real numbers in floating-point format:

$$(-1)^E \cdot 2^F (b_{p-1} b_{p-2} \dots b_0)$$

where...

$s = 0$ or 1

$E = \text{any integer}$

$b_i = 0$ or 1

$p = \text{number of bits}$

Table 2-3 summarizes the formats.

DATA FORMATS	RANGE	PRECISION	MOST SIGNIFICANT BYTE										HIGHEST ADDRESSED BYTE									
			7	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0	7	0
WORD INTEGER	10^4	16 BITS																				
SHORT INTEGER	10^2	32 BITS																				
LONG INTEGER	10^{16}	64 BITS																				
PACKED BCD	10^{18}	18 DIGITS	S	X	$d_{17}, d_{16}, d_{15}, d_{14}, d_{13}, d_{12}, d_{11}, d_{10}, d_9, d_8, d_7, d_6, d_5, d_4, d_3, d_2, d_1, d_0$	MAGNITUDE																
			79	72																		
SINGLE PRECISION	10^{-93}	24BITS	S	BIASED EXPONENT	SIGNIFICAND																	
			31	23	0																	
DOUBLE PRECISION	10^{-493}	53 BITS	S	BIASED EXPONENT	SIGNIFICAND																	
			63	52	0																	
EXTENDED PRECISION	10^{-4932}	64 BITS	S	BIASED EXPONENT	I	SIGNIFICAND																
			79	64	634	0																

- (1) S = SIGN BIT (0 = positive, 1 = negative)
- (2) d_i = DECIMAL DIGIT (TWO PER TYPE)
- (3) X = BITS HAVE NO SIGNIFICANCE; 80387 IGNORES THEM WHEN LOADING, ZEROS WHEN STORING
- (4) Δ = POSITION OF IMPLICIT BINARY POINT
- (5) I = INTEGER BIT OF SIGNIFICAND; STORED IN TEMPORARY REAL, IMPLICIT IN SINGLE AND DOUBLE PRECISION
- (6) EXPONENT BIAS (NORMALIZED VALUES):
SINGLE: 127 (7FH)
DOUBLE: 1023 (3FFH)
EXTENDED REAL: 16383 (3FFFH)
- (7) PACKED BCD: $(-1)^s (d_{17} \dots d_0)$
- (8) REAL: $(-1)^s (2^{e-bias}) (F_{p-1} F_{p-2} \dots F_0)$

mantissa

* least significant byte first (LSB) PC

G40003

Figure 2-10. 80387 Data Formats

VAX
+ least significant byte first
integer 4321
least sign 1
most sign 0

Parameter
Format width in bits
P (bits of precision)
Exponent width in bits
E _{max}
E _{min}
Exponent bias

\$NCP
\$NOP
\$NOP

\$rop
\$EVE TPLIST HS

ROUTINE

LIST OF

78-079A-04C

D-82884

C-28061

INPUT PARAMETERS ARE: AS FL=1 1 1 2

TAPE NO. 1 FILE NO. 2
RECORD LENGTH 2 48
BINARY CREATED 1987 AUG 27 18:47:22 ; DATA TYPE & CREATION DATE IS EEE-3
DAY 0 HR 15 MIN 3 SEC SUM. DATA FILE 78/8715 ; SAT. NAME(S) & FILE TITLE : 78/8415 0
; ; START TIME OF FILE 890/2/1 0:0:0 ; STCP TIME OF FILE
; ; TIME OF FIRST CHAFT. IN FILE 78/8715 ; ;
E+15 TIME ; #1 FLUX 7-HET I BSTP, HIGH GAIN R2 1.0E-05 1.0
ATRIX ;TYPE HET I BSTP,HI RATE L COUNT ON HET I BSTP,HI M
7 1.75 GEOM PARTICLE MODENAME EVENT TYPE I 22.14
7 E MIN E MAX 32767 31.24 1.552 PROTON : IR,
RATE L FRCTION ; IBC 45.20 57.39 1.0279 PROTON ; IB3 7 #2
FLUX 9-HET I BSTP, LOW GAIN R2 1.0E-05 1.0E+05 HELI BSTP,LO
RATE L GEM PARTICLE MODENAME EVENT TYPE I 34.61 45.09 1.558 HE4 : IL,
FLUX 11-HET I PEN, HIGH GAIN R2 1.0E-05 1.0E+05 HELI PEN,HI R
RATE L GEM PARTICLE MODENAME EVENT TYPE I 32767 COUNT ON HET I PEN,HI MATRIX ;TYPE E WIN E MAX
1 ! HET II AST,HI RATE L 132.39 241.23 1.688 PROTON : IPI
IX ;TYPE E MIN E MAX GEOM PARTICLE MODENAME EVENT TYPE I 1.0E-05 1.0E+0
1.280 ELEC ; IIa2 12 4.45 6.41 1.017 PROTON : IIa2 2.0
12 1 7.18 12.83 1.0283 PROTON ; IIa3
TAPE NO. 1 FILE NO. 2
RECORD 4613 LENGTH 1961
" "

E C 空 D 空 C

XD 空 C Xa 空 HD 空 HD

J 1 空 D 空 空 D DLE B

D C *IE

D 空 C HE
MC 空 C MC 空 C

***** JCB DONE.
\$WEOLPS

\$\$

\$JCB 15:23:58
GASS IN HT

SNOF

SNOF

SNOF

SNOF

SNOF

INPUT PARAMETERS ARE: AS SRE=1 1 1 5

TAPe NO. 1 FILE NO. 9
RECORD LENGTH 248
TINARY CREATED 1987 JUL 17 11:57:48 : DATA TYPE & CREATION DATE ISCE-3
DAY SEC SEC-SEC DATA FILE E ; SAT. NAME(S) & FILE TITLE : 11/83
: : START TIME OF FILE 87/2/7 : f ; STOP TIME OF FILE 11/83
E TIME ; H 1 FLUX 7-HET I BSTP, HIGH GAIN COUNT ON HET I BSTP, HI
ATRIX ; TYPE E MIN E MAX GEOM PARTICLE MODENAME EVENT TYPE I 22.14 RATE 1.1E-15 1.1
7 1.7 5 PROTON : IBS 30.24 45.23 1.592 PROTON ; IBS
FLUX S HET I BSTP, LOW GAIN 7 1.279 PROTON ; IBS 7 ; H 2
RATE L 32767 COUNT ON HET I BSTP, LO MATRIX ;TYPE E MIN BSTP, LO
GEOM PARTICLE MODENAME EVENT TYPE I 20.01 1.598 HE4 ; IBS
FLUX 1 HET I PEN, HIGH GAIN RE 1.0E-15 ; IBS 5 ; H 2
ATE L 32767 COUNT ON HET I PEN, HI MATRIX ;TYPE E MIN BSTP, HI
GEOM PARTICLE MODENAME EVENT TYPE I 132.32 241.23 1.680 PROTON ; IBS
1 1 HET II AST, HI RATE L 12-HET II AST, HIGH GAIN RE 1.0E-15 1.0E+0
IX ; TYPE E MIN E MAX GEOM PARTICLE MODENAME EVENT TYPE I 0.22 2.06
12 ELEC I IIA 12 1.283 PROTON ; IIA3 FRCTON ; IIA2
***** JOB DONE.
SNOF LS

D. 82884